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ABSTRACT

This project examined: states' organizational and financial models of virtual colleges and universities (VCUs); statewide goals for which VCUs were created; and policies, programs, and student participation in VCUs. Data came from a survey of all known statewide and systemwide VCUs and interviews with VCU leaders. Overall, VCUs are gravitating toward two service models (one that is centralized and provides services to students, and another this is a distributed service model where the VCU hosts an online catalog but institutions provide most of the services). Most VCUs are expanding access to geographically underserved populations. Most VCUs were initiated with direct or indirect state appropriations and continue to rely heavily on this funding source for operations. However, some VCUs are building sustainable revenue streams. Out of 20 goals studied at the VCUs' founding and at present, current goals are more attuned to increasing state/system higher education efficiency and meeting state workforce needs. Most VCUs are expected to play a role in system/state level policy change related to distance learning. In general, the higher a VCUs funding level, the higher it perceives its overall goals have been met. The more highly funded and more centralized it is, the greater impact on policy change a VCU is likely to report. Research methodology and study participants are appended. (Contains 18 references.) (SM)

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Virtual College & University Consortia

A National Study

Rhonda M. Epper
and Myk Garn

August 2003

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Preface

In July 2003, the U.S. Department of Education released a study revealing that almost 90% of American public colleges and universities offered electronic distance learning in the 2000-2001 academic year. About 60% of these distance learning-offering-institutions were participating in a consortium for distance learning. Of these, 75% were participating in state- or system-level consortia. Thus far, we have had very little information about these consortia.

None of the consortia examined actually offer degrees. Those are awarded by the campuses that work directly with the students. However each consortium is different. They were each developed in a context of specific needs typically defined by policy-makers in each of the states in which they emerged. Rhonda Epper and Myk Garn analyze these differences by looking at the goals, structures, and financing of the consortia. They also help us see the evolution of these consortia over time.

This report offers the first in-depth look at statewide and systemwide higher education consortia. It is useful now, but will continue to be of great value as new types of collaborative entities emerge among higher education institutions. We will be able to build on the foundations set by these innovative ventures.

Sally M. Johnstone
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Myk Garn is the Senior Advisor for Distance Learning for the Kentucky Council on Postsecondary Education. His roles include staff support to the Distance Learning Advisory Committee (DLAC), liaison with Kentucky postsecondary education distance learning representatives, and coordination of distance learning technology, education, and accessibility policy issues. Most recently he served (1999 - 2003) as founding Chief Academic Officer for the Kentucky Virtual University. From 1996 to 1999 he was Director of Distance Education for the University System of Georgia and previously held positions as Executive Director of the Instructional Technology Development Center at Lamar University-Orange, producer of the "Techniques of the Masters" photography series for Eastman Kodak Company, and instructor in photography at Lansing Community College. He holds a BA in Professional Photography from Brooks Institute, a MA in Educational Systems Design from Michigan State University, and is in final candidacy for the Ph.D. in Educational Policies and Evaluation at the University of Kentucky.

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Executive Summary

State and system leaders created virtual colleges and universities (VCUs) with similar motives in mind: to provide educational opportunities that will result in a better-educated workforce, personal prosperity for citizens, and a strong economy for the state. These are worthy goals, but leaders need greater understanding about whether virtual universities are meeting the goals for which they were designed. In response to the lack of research on this issue, in June 2002 the State Higher Education Executive Officers (SHEEO) and the Western Cooperative for Educational Telecommunications (WCET) jointly undertook a national study to examine the goals, functions, challenges, and outcomes of statewide virtual universities across the United States. The project set out to achieve the following goals:

1. **Identify and describe the types of VCU organizational and financial models in use by states.**
2. **Understand the statewide goals for which VCUs were created, whether the goals are changing, and how well VCU leaders perceive they have met their goals.**
3. **Discover and describe the policies, programs, and student participation in virtual universities.**
4. **Develop implications from the study that provide direction for policymakers.**

For purposes of this study, the term "Virtual College/University" or VCU is used to encompass distance learning consortia that comprise membership of the public higher education institutions (two year and/or four year) within a single system or state. Multi-state initiatives, such as Western Governors University or the Southern Regional Electronic Campus were excluded from the analysis as were individual institutions. The study included two primary data collection methods. First, a survey of all known statewide and systemwide VCUs was conducted from October 2002 through January 2003. Second, in-depth interviews with six VCU leaders were conducted in March 2003. Major findings from the study include:

Organizational Models:
The VCUs appear to be gravitating toward two distinctly different service models: one that is centralized – providing services to students, both administrative and academic; the other being a distributed service model – where the VCU hosts an online catalog, but institutions provide most of the services. There is also emerging evidence that some VCUs engage in business practices leading to sustainability and a perceived higher level of goal achievement.

Programs, Enrollments, and Students:
Most VCUs are expanding access to geographically underserved populations. Over half (52%) of responding VCUs reported that the majority of their students were physically at a distance from a campus. On the other hand, 42% of VCUs identified campus-based students as their primary users. While serving campus-based students has often been viewed as an unintended side effect of the VCU, it also represents a broadening of the definition of access.

Financing of Virtual Colleges and Universities:
Most VCUs were initiated with direct or in-direct state appropriations, and continue to rely heavily on this funding source for operations. However, there is emerging evidence that some VCUs are building sustainable revenue streams as reliance on direct and in-direct allocations decreased slightly and the role of tuition and service fees increased slightly since founding.

VCU Goals in Transition:
Out of 20 goals studied at the VCU's founding and at present, current goals appear more attuned to increasing state/system higher education efficiency and meeting state workforce needs. While still among the highest priori-

ties, providing access and serving the underserved (the traditional goals of distance education) have declined slightly in importance.

The VCU Role in Policy Change:
The majority of VCUs (63%) are expected to play a role in system or state level policy change related to distance learning.

Progress and Impact:
In general, the higher a VCU's funding level, the higher it perceived its overall goals had been met. Further, the more highly funded and more centralized it was, the greater the impact on policy change (tuition policy, duplication, articulation, and transfer) a VCU was likely to report.

Implications for Policy Makers:

Policy makers and other officials to whom VCUs report are encouraged to use findings from this study to help raise awareness about the issues and challenges facing VCUs. Not all of the findings will apply to every VCU, but most should help policymakers and VCU leaders better define expectations, roles, and new opportunities. In particular, this research points toward a need for greater understanding in the following areas:

- **Set clear expectations for the VCU.** Expectations should be consistent with a VCU's organizational type and funding level. Almost all VCUs have as their major goal "expanding access." Yet policymakers should expect different results from a distributed VCU with no budget than from a high-service, high-budget VCU.
- **Define VCU enrollments and users.** System and state higher education leaders should work in conjunction with VCU leaders to develop common definitions for distance learning enrollment. The role and relationship of enrollments to VCU effectiveness and efficiency are nebulous at best. Few VCUs can legitimately or accurately identify students as "VCU students." Many of the VCUs neither generate nor manage the students who benefit from VCU policy efforts, use VCU infrastructure or services – and in all cases the courses and programs in which students are enrolled are accredited by the provider institutions. If policy leaders expect to assess the impact of VCUs on expanding access, statewide data collection must be revised to accurately reflect "real" VCU supported enrollments and users.
- **Clearly define VCU policy roles.** Make sure institutions understand the role the VCU is expected to play in statewide or systemwide policy change. Institutions are more likely to collaborate with an organization that has a clear mandate from the system or state and resources to accomplish its mission.
- **Hold the VCU accountable for measuring progress towards and meeting its goals.** Consider encouraging the VCU to benchmark against peer VCUs.
- **Encourage sustainable business practices.** VCUs can build cost-efficient, sustainable models by taking more aggressive roles in collaborative program development, quality assurance, standardization, and scalability.

VCU Taxonomy and implications for research:

A new taxonomy is proposed, building upon the 1999 VCU taxonomy created by David Wolf and Sally Johnstone. The new model consists of two VCU dimensions – degree of centralization and degree of emphasis on business practices, resulting in four consortial VCU organizational types: Distributed Agency Model, Distributed Enterprise Model, Central Agency Model, and Central Enterprise Model.

VCU Two-Dimensional Taxonomy

	Low Business Practice	**High Business Practice**
High Centralization	***Central Agency Model*** Provides central student services and academic articulation. Organizationally and financially embedded in an academic agency, such as a system office or coordinating board.	***Central Enterprise Model*** Provides central student services and academic articulation. May be organizationally embedded in an academic agency, but behaves as a business enterprise by building revenue streams for self-sustainability and engaging in quality control, performance measurement, standardization, and/or benchmarking.
Low Centralization	***Distributed Agency Model*** Provides electronic course catalog; little or no services; no articulation. Organizationally and financially embedded in an academic agency, such as a system office or coordinating board.	***Distributed Enterprise Model*** Provides electronic course catalog; little or no services; no articulation. May be organizationally embedded in an academic agency, but engages in limited business practices, such as quality control, performance measurement, standardization, and/or benchmarking.

While there were superior performers from all four VCU categories, the "Central Enterprise" VCUs reported the highest overall success at meeting their goals. The Central Enterprise VCUs each were self-sustaining or planned to become self-sustaining. This goal was further supported by findings that these VCUs placed a higher funding emphasis on service fees (from institutions) and revenue sharing (partial tuition), both of which provide revenue streams tied to volume. The Centralized Enterprise VCUs were the most likely to take an active role in promoting standardization and scalability of instruction, addressing the issues that might dramatically increase (or impede) growth of VCU user volume, and thus the revenues tied to that growth.

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Introduction

Virtual colleges and universities, as we know them in America, were created amid the technology boom of the mid-to-late 1990s. Technology in general, and distance learning in particular, seemed to hold great promise in solving a number of problems in higher education. Many state leaders believed distance learning could expand educational access and increase economic development, and that putting resources into a *consortial* virtual university made sense financially. Statewide agencies saw opportunities to explore, develop, and influence policy innovation outside of traditional structures. By the year 2000, almost every state in the nation had created some initiative or entity resembling a virtual university.

Then 2001 brought an economic downturn, hitting the technology sector especially hard. In higher education, this drove more realistic assessments of the realities, costs, and payoffs of distance learning. While internet-based distance learning continues to be a growing enterprise for many campus-based initiatives, the *consortial* virtual universities have yet to be fully embraced or understood by the higher education community. State leaders still describe them as a critical resource for meeting statewide educational and policy goals. Yet in some cases, the virtual university has been questioned as a duplication of institutional responsibility, and an unnecessary layer of bureaucracy – especially during tight budget years. But while policy leaders, institutional leaders, virtual college leaders, and industry observers debate the value and appropriate role for the Virtual U, one thing is certain: students are enrolling in courses via these websites and using these services to meet educational goals.

Study Background

State and system leaders created virtual colleges and universities with similar motives in mind: to provide educational opportunities that will result in a better-educated workforce, personal prosperity for citizens, and a strong economy for the state. These are all worthy goals, but leaders need greater understanding about whether virtual universities are meeting the goals for which they were designed. In 2002, more than five years into the VCU movement in America, very little was known about these organizations and their impact. In addition, there was little guidance or research to help state and system leaders or institutional leaders determine the feasibility of creating or joining a multi-campus virtual university. And once created, there were no benchmarks or measures by which state and institutional "investors" could judge their success.

In response to the lack of research on this issue, in June 2002 the State Higher Education Executive Officers (SHEEO) and the Western Cooperative for Educational Telecommunications (WCET) jointly undertook a national study to examine the goals, functions, challenges, and outcomes of statewide virtual universities across the United States. SHEEO provided the project's overall management, while WCET's EduTools project provided support so that the results could be displayed in the their 'e-learning Policies' web site. EduTools (www.edutools.info) is supported by the William and Flora Hewlett Foundation. The project set out to achieve the following goals:

- Identify and describe the types of VCU organizational and financial models in use by states.
- Understand the statewide goals for which VCUs were created, how the goals are changing, and how well VCU leaders perceive they have met their goals.
- Discover and describe the policies, programs, and student participation in virtual universities.
- Develop implications from the study that provide direction for policymakers.

From these four overarching goals, a more detailed list of research questions (see Research Methodology in *Appendix A*) was derived to guide the project's work.

VCU Definition

The term "virtual college or university" is used to describe a broad range of entities and activities: corporate training centers, distance learning efforts of individual institutions, non-profit and governmental education activities, and multi-state and international learning collaboratives. Aside from institutional programs, most of these initiatives are not true "universities" in the degree-granting sense of the word. Notable exceptions lie mostly in the for-profit sector, and include such entities as Jones International University and Capella University. A non-profit degree-granting example, though relatively rare in the U.S., would be Western Governors University (WGU). For purposes of this study, the term "Virtual College/University" or VCU is used to encompass those initiatives that comprise membership of the public higher education institutions (two year and/or four year) within a single system or state. Multi-state initiatives, such as Western Governors University or the Southern Regional Electronic Campus were excluded from the analysis. Single institutions sometimes refer to their distance learning programs as virtual universities, and indeed some are quite significant (e.g., University of Maryland University College, Penn State World Campus). This study, however, examined only consortial, multi-institutional VCU initiatives. Given the definitional boundaries set, there were 61 organizations in the U.S. that met the VCU definition (See *Table 1*, p. 15).

Prior Research

In a review of the literature, a fairly extensive body of work related to virtual universities emerged. Over 100 studies, articles, and state reports addressing various issues about virtual colleges and universities were collected. This collection of readings was later narrowed to a "core" group of readings that were most meaningful to the project goals. Of particular importance to the VCU project were several articles that helped develop common terminology, classification, and meaning for VCUs. Twigg and Oblinger (1997) defined the virtual university as "collaborating institutions [that] can deliver modules, courses, and degrees to individuals and groups of learners who interact with faculty and with organized learning materials, in both real-time and delayed-time (asynchronous) modes" (p.1). Based on a roundtable of experts convened in November 1996, the Twigg and Oblinger monograph predicted a shift from a campus-centric model of higher education to a consumer-centric model, facilitated by a combination of new technologies, changing student demographics, the rising cost of a residential experience, and the need for lifelong learning opportunities. The notion of a virtual university as an independent operating entity was in its infancy, with only a few VCUs having been established by 1997 (e.g., Western Governors University, Education Network of Maine, Colorado Electronic Community College). The concept of the VCU – especially the prospect that it could save money, expand access, and force institutions to become more entrepreneurial – was compelling and appealing to many state policy leaders who soon jumped on the bandwagon following the establishment of WGU. By 1999 thirty-three states had created virtual universities and five more were considering them, (Epper, 1999). In 2002, forty-five states had created a consortial VCU, with 61 statewide and systemwide VCUs identified in the present study.

To understand organizational models and functions, researchers have proposed different classification strategies for VCUs. Hurst (1998) provided a taxonomy that distinguishes VCUs primarily by governance structure. He described six scenarios as policy choices for leaders, ranging from the "current structure" to collaborative models to a separate and independent "Open University." Berg (1998) used criteria such as interstate membership, accreditation, brokering, and private industry involvement to compare and contrast two VCU organizational models. Smith (1998) examined consortial VCU efforts, labeling them as Course Brokers, Collaborators, or Wholesale Purchasers.

The present VCU Project relied most heavily on a taxonomy developed by Wolf and Johnstone (1999). The taxonomy described different ways in which colleges and universities work together in an electronic environment. It described four consortial VCU types: the Virtual University, Virtual University Consortium, Academic Services Consortium, and the University Information Consortium.

Type 1 – Virtual University: separate, degree-granting entity; no physical campus.

Type 2 – Virtual University Consortium: no degree granted, but accredited academic institutions are linked online and supply centralized or coordinated services to students, with mutual articulation among consortium members.

Type 3 – Academic Services Consortium: no degree granted, but accredited academic institutions are linked online and supply centralized or coordinated services to students, with no articulation among consortium members.

Type 4 – University Information Consortium: no degree granted, no coordinated services to students, accredited academic institutions are linked electronically.

Adapted from David Wolf and Sally Johnstone, "Cleaning up the language: establishing a consistent vocabulary for electronically delivered academic programs," Change, July/August 1999.

Wolf and Johnstone used several criteria to differentiate the four types of consortial VCUs: 1) the ability/intention to grant degrees; 2) whether there is a physical campus; 3) whether services are centrally coordinated; and 4) whether consortia partners have articulation agreements. The VCU project used this taxonomy as a building block for further comparisons and classification of existing consortial VCUs.

Other literature that was especially helpful in understanding the landscape of VCUs included reports that addressed VCUs from a public policy perspective. "The State of E-Learning in the States" was prepared by the National Governors Association (NGA) in 2001. This report, which contained results from a national survey, found that most states were developing delivery systems (such as virtual universities), promoting access to e-learning, exploring ways to assure the quality of e-learning content, and exploring governance issues as they bring e-learning activities into a coherent system. At the time of the study, states rated quality issues as their highest concern with e-learning. In an examination of state-level policies affecting distance education, Kovel-Jarboe (1997) identified clusters of policy where institutional and state-level responsibilities intersect: quality; student support; human and financial resources; governance, mission, programs; and infrastructure. While Kovel-Jarboe was concerned with individual institutional distance education programs, it seems apparent that virtual colleges and universities, as vehicles for collaboration, were designed in part to help solve issues at this very delicate intersection between institutions and states.

Finally, bearing significantly on the VCU Project was a Pew Symposium convened by Carol Twigg and the Center for Academic Transformation in July 2002. The symposium gathered 13 chief executives from VCUs around the nation to discuss roles, policy issues, and the future of VCUs. Participants responded to a set of questions posed prior to the event, which produced a collection of thoughtful essays by VCU leaders. The following quotes demonstrate the spirited and diverse opinions expressed by VCU leaders:

> "At a certain point in history, they may have been the lubricant needed for a massive shifting of the gears in higher education. For state virtual universities, the moment may be passing."

On the other hand, another VCU leader saw the world differently:

> "The notion that VCUs are not needed is "likely to be a 'cover argument' by individual campuses to avoid collaboration. . . Following this path would lead to destructive competition, poorly served students, and very unhappy stakeholders and funders."

The outcome of the symposium was a monograph published by the Center for Academic Transformation in July 2003 (Twigg, 2003).

Format of the Report

Findings from the study are presented in seven sections that follow: (1) The VCU Movement in America; (2) Organizational Models; (3) Programs, Enrollments, and Students; (4) Financing of Virtual Colleges and Universities; (5) VCU Goals in Transition; and (6) The VCU Role in Policy Change; and (7) Progress and Impact. Each section will present overall findings, along with supporting quantitative and qualitative data. The final section examines the implications of virtual colleges for policy makers and future research.

The VCU Movement in America

"I fear people will prefer to attend a real university, not one that is almost real; will want to send their children to a real university, not an almost real one; and will want a degree from a real university, not an almost real university."

– note from state university official to Utah Governor Leavitt recommending against naming WGU the Western Virtual University, (Pipho, 1996)

VCU History

The mid to late nineties were heady years for change agents in higher education. A feeling of tsunamic change was strong upon the land. Three major movements were encouraging the expansion of institutions into distance learning: communication and computing technologies were coming together at an alarming pace. This convergence was in turn opening new ways for workers to learn without having to "stop-out" of their careers. Finally, as states sought to increase the percentage of college-educated citizens, the pressures to contain, and even reduce, the cost of going to college increased as well.

The feeling was well captured by University of Michigan president emeritus James J. Duderstadt, "The market forces unleashed by technology and driven by increasing demand for higher education are powerful. If they are allowed to dominate and reshape the higher education enterprise, we will find ourselves facing a brave new world in which some of the most important values and traditions of the university fall by the wayside," (1999, p. 40).

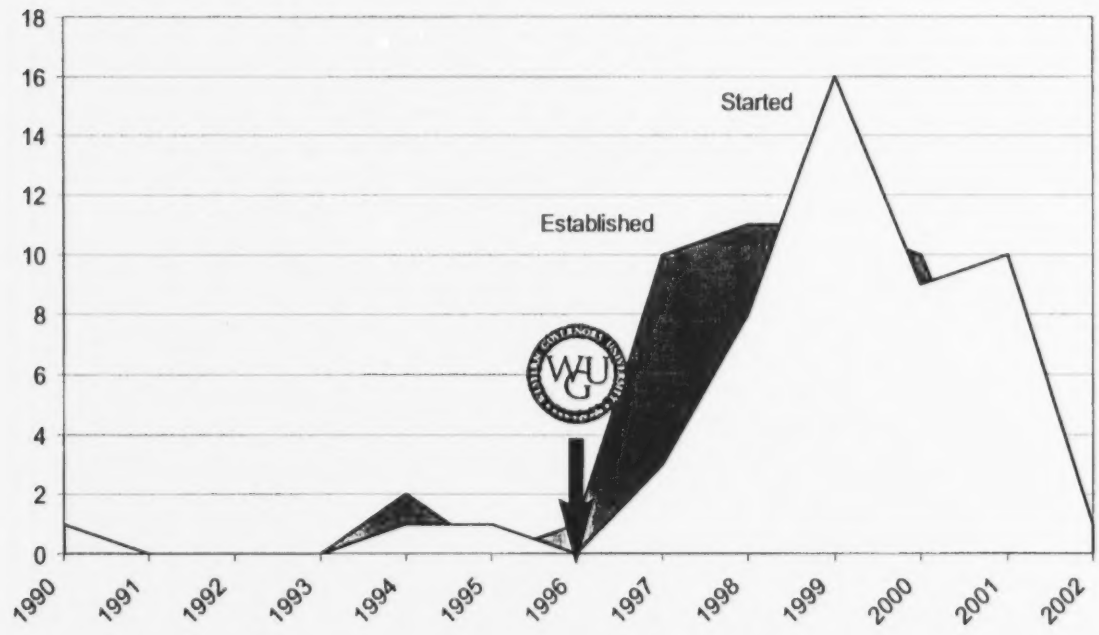
There was some question as to the ability of traditional institutions to address these issues if they stuck to their old ways. As the Internet hype was beginning, Davis & Botkin (1994) placed the higher education enterprise as teetering between maturity and decline. Just as the idea of "reinventing government' was driving the infusion of corporate-style mechanisms in government, many leaders felt that higher education also needed an infusion of new ways. Davis asserted that the difference between continuing to thrive as a mature organization or beginning to decline – is the organization's ability to transform itself. But could colleges and universities, as mature organizations, transform themselves? Mature organizations change significantly only when three conditions are met. "First there must be enormous external pressures. Second, there must be people inside who are strongly dissatisfied with the existing order. And third, there must be a coherent alternative embodied in a plan, a model, or a vision," (Toffler, 1985). There were dissatisfied insiders trying to address these very real pressures of cost, quality, and access to higher education. But insiders could not do it alone. What was needed was the "coherent alternative" Toeffler had called for.

On June 24th, 1996 the vision arrived with the announcement of Western Governors University. As seen from *Figure 1*, WGU was a galvanic, trigger event sparking the creation of VCUs across the nation. It was a vision that sparked more than 60 plans and models.

Because WGU took so long to develop (it did not actively offer courses until 2000) these new "virtual" colleges and universities did not have an operating plan or a model to follow. While some joined the dot.com marketplace, most public institutions avoided the vision of becoming a new, separate, degree granting institution, because this model had been tested and gone down to defeat with the Education Network of Maine (EdNet) in 1995.

While defined by Cardinal John Henry Newman in 1853 as pejoratively "not real" (a reason the Western governors did not include "virtual" in the WGU title), it had been the role of these VCUs to define the reality of "virtual" education in the 21st century.

Figure 1: Timeline of VCU Establishment and Operations



Who initiated the VCU?

As noted, the trigger event sparking VCU creation was the announcement of WGU in 1996. Prior to this time there were many successful distance education operations, but the idea of a "virtual" university, utilizing the inexpensive delivery mode of the Internet was catalytic. So WGU, and companion multi-state initiatives like the Southern Regional Education Board's Electronic Campus (SREC) established the basic concept of a VCU.

At the state higher education level – who was listening? Clearly a different constituency than creators of WGU. While WGU was established by a committee selected by governors of 13 states, when asked which organizations were primarily responsible for initiating the VCU in their state, respondents to the VCU survey rated institutions (49%), a system governing board (29%), a state coordinating or governing board (28%), before indicating legislature (12%), or the Governor's office (12%). (Some respondents noted more than one initiator.) This pattern was relatively consistent across all VCU organizational types. The "who" was often an individual person or group, as 84% of respondents credited specific individuals, a presidents council, or the state or system office with primary responsibility in founding the VCU.

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Organizational Models

Finding #1:

The VCUs appear to be gravitating toward two distinctly different service models: one that is centralized – providing services to students, both administrative and academic; the other being a distributed service model – where the VCU hosts an online catalog, but institutions provide most of the services. There is also emerging evidence that some VCUs engage in business practices leading to sustainability and a perceived higher level of goal achievement.

- Since 1996, at least 61 VCU organizations have been established in 45 states across the nation.
- Seventy percent of VCUs are accountable to a systemwide governing board or statewide coordinating board. Some are charged with a direct role in creating policy change on behalf of distance learners. All are subject to shifting political pressures that affect state higher education boards.
- VCUs with a strong focus on a particular sector (two-year or four-year) are more likely to have a centralized model. Those VCUs serving the entire statewide spectrum are more likely to have a distributed model.
- VCUs that have adopted business management practices, such as quality assurance, benchmarking, standardization, and scalability, experienced greater perceived success in achieving their goals than those that did not adopt these practices.

The VCU National Landscape

Preliminary research revealed 61 organizations across the U.S. that met the VCU definition adopted for the study. Forty-five states were represented by the identified VCUs (see *Figure 2*). Only five states and the District of Columbia did not appear to have a system or state level VCU: Alaska, Delaware, New Hampshire, New Mexico, and Vermont. A recent National Center for Education Statistics (NCES) study (July, 2003) showed that the majority of public institutions in the U.S. participate in a distance education consortium of some kind (i.e., state, system, regional, national, international). According to the study, as of spring 2002 83% of public two-year institutions and 68% of public four-year institutions participated in distance education consortia.

Several states claimed not to have a VCU, yet if there was minimally a central website where students could find information on distance learning courses available from multiple institutions in the system or state, it was included in the study as a VCU. It is worth noting that only 14 of the 61 identified organizations (23%) use the term "virtual" in their names. Only four use the term "virtual university:" Kentucky, Michigan, Minnesota, and New Jersey. Others use terms such as "virtual campus" or "virtual college consortium." Twelve organizations (20%) use the term "online" in their names, usually in conjunction with the state or system name (e.g., Maryland Online, University of Arkansas Online). Nine organizations (15%) use the term "consortium," "collaborative," "community," or "partnership" in their names (e.g., Connecticut Distance Learning Consortium). Six organizations (10%) use the term "electronic," presumably as a substitute for "virtual," but also to encompass a variety of delivery modes beyond "online" (e.g, Mississippi Electronic Campus). "Network" is used by six organizations (10%), such as Oregon Network for Education and SUNY Learning Network.

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Figure 2: VCU Participants

In most cases, VCU names were carefully crafted for a variety of reasons – mainly for marketing to students and political positioning within the system or state. Some were intended to make a bold statement to existing institutions, especially those using "virtual university." Others intended to position themselves as a collaborator and not a competitor to existing institutions, thus choosing a name like "distance learning consortium." A few VCUs were named after their creating bodies, such as Arizona Regents University, which arguably could lend prestige to the new entity. One of the VCU interview respondents noted that the decision over what to name the entity was a difficult one. "We struggled with the name for a long time, but the name really had to do with what the concept was. There are some who still carry on about the name, but at some point we said we needed to be done with it and move on."

Classification of VCUs by Sector

Table 1 lists the 61 identified VCUs according to the primary educational sectors they serve. The majority of VCUs (61%) have membership comprised of both two-year and four-year institutions. Fifteen VCUs (25%) include only two-year institutions, and nine VCUs (15%) include primarily the four-year sector. (Note that it is difficult to draw distinct boundaries because two year colleges may offer an occasional baccalaureate degree and some four-year VCUs may offer associate degrees.)

Out of the 37 multi-sector VCUs, less than half (16) also include private, not-for-profit institutions in their membership. Seven multi-sector VCUs include high school partners: Connecticut Distance Learning Consortium, Indiana College Network, Minnesota Virtual University, Oregon Network for Education, South Carolina Partnership for Distance Education, University of Wisconsin Learning Innovations, and Utah Education Network. It is important to understand that the list above represents all known VCU consortia at a particular point in time. Since the study began, at least one VCU has ceased operations (Georgia GLOBE). At the same time, new initiatives are undoubtedly underway. Conclusions and findings discussed in the remainder of this report are based on a majority subset of the 61 organizations. Surveys were returned by 51 of the VCUs, representing a response rate of 84%. (See *Appendix B* for a list of study participants.)

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Table 1: Classification of VCUs by Sector

Multi-Sector VCUs (two-year and four-year); n=37

Alabama Distance Learning Consortium
California Virtual Campus
Connecticut Distance Learning Consortium
Electronic Campus of Virginia
Florida Virtual Campus
Georgia GLOBE
Idaho Electronic Campus
Illinois Virtual Campus
Indiana College Network
Iowa Learns
Kansas Distance Learning
KC REACHE (Kansas)
Kentucky Virtual University
Louisiana Board of Regents Electronic Campus
Maryland Online
Massachusetts Colleges Online
Michigan Virtual University
Minnesota Virtual University
Missouri Learner's Network
Nebraska Distance Learning Catalog
Nevada Distance Education Online Course Catalog
New Jersey Virtual University
North Dakota University System Online
Ohio Learning Network
Online College of Oklahoma
Oregon Network for Education
Rhode Island Wave Rider
Satellite Network of West Virginia
South Carolina Partnership for Distance Education
SUNY Learning Network (New York)
Tennessee Board of Regents Online Degree Programs
University of Arkansas Online
University of Hawaii Distance Learning
University of Wisconsin Learning Innovations
Utah Education Network
Utah Electronic College
Wyoming Distance Education Consortium

Single Sector VCUs; n=23

Two-Year VCUs; n=15

Arizona Learning Systems
Colorado Community Colleges Online
EduKan (Kansas)
Georgia Virtual Technical College
Illinois Community Colleges Online
Iowa Community College Online Consortium
Michigan Community College Virtual Learning Collaborative
Mississippi Virtual Community College
New Jersey Virtual Community College Consortium
North Carolina Virtual Learning Community
Oregon Community Colleges Distance Learning
Pennsylvania Virtual Community College
Virtual College of Texas
Washington Online Virtual Campus
Wisconsin Technical Colleges.com

Four-Year VCUs; n=9

Arizona Regents Online
MSeCampus (Mississippi)
Montana University System Distance Learning
South Dakota Electronic University Consortium
UMass Online (Massachusetts)
University College – University of Maine System
University of Houston System CampusNet
University of Illinois Online
UT TeleCampus (Texas)

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Membership Requirements

Almost all VCUs (94%) require the provider institutions to be regionally accredited, while only three (6%) do not. Other membership requirements mentioned by survey respondents were:

- Must be an institution within the system or state
- Must pay regular dues to the VCU
- Must pay service fees to the VCU
- Must pay a start-up fee to the VCU
- Must sign a Memorandum of Understanding
- Must deliver courses via technology
- Must post courses on the VCU site

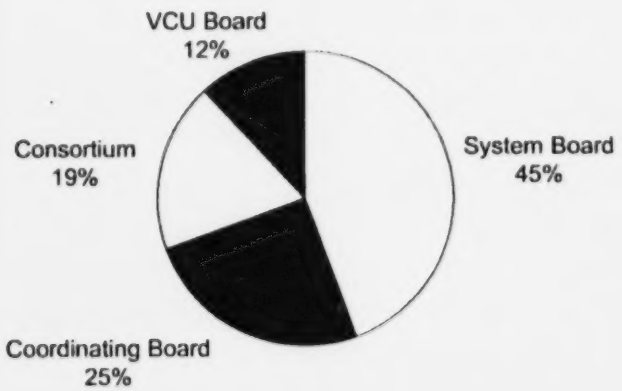
Only two VCUs indicated out-of-state providers were part of their consortium, which points toward a strong focus on serving in-state needs. In an interview response, one VCU leader, Kate Carey, Executive Director of the Ohio Learning Network, described this focus:

> *I think the important thing about the Ohio Learning Network is we really are focusing on Ohio. That's where we need to work, at least for the next two years. Sure, we're looking for international opportunities; sure we'd like to improve reciprocity with other states, but, I think because the funding is going to be so tight the next two years you will see most of us in our own backyards. And not self-righteously so nor truly in our own self-interest. It's not that we want to fly low – it's just that there is so much work to be done here.*

Governance Structure

The majority of VCUs are accountable to a system office/governing board (45%) or a statewide coordinating board (25%). Another 19% report to some type of statewide consortium, which may be made up of representatives from postsecondary education and other interest groups. Six VCUs (12%) report directly to their own governing boards. From the VCU's perspective, advantages of reporting to a system or state board are the authority that comes with being affiliated with the system or state office, and greater certainty in funding. On the other hand, institutions may regard the VCU as a thinly disguised extension of the system office whose ultimate aim is to regulate their distance learning programs.

Figure 3: VCU Reporting Structure



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In addition to the formal reporting structure, almost all the VCUs have advisory groups made up of various constituencies. The most commonly mentioned advisory group members were presidents, chief academic officers, and distance education directors. Some VCUs include faculty and representatives from business and other sectors of government on their advisory boards. When asked how their governance structure affected VCU operations, interview respondents thought there were positive and negative aspects to their respective structures. The UT TeleCampus, for example, is governed by the University of Texas System Board of Regents. Darcy Hardy, Assistant Vice Chancellor and Director of the TeleCampus, observed:

> *We received authority and resources from the Regents to develop the TeleCampus, thus did not have to gain consensus from all of the campus leaders. With that said, however, we visited every campus before the TeleCampus was built to get input from administrators, staff, faculty, and students. We've 'enjoyed' answering to only one group, but since we ultimately serve the campuses we have been thinking at this point it would be useful to form a leadership-based advisory group from the UT campuses.*

Similarly, the CEO of Georgia GLOBE reported directly to the chancellor of the University System of Georgia. While this gave GLOBE more freedom to operate without the heavy constraints of building consensus, there were downsides. As Kris Biesinger, Assistant Vice Chancellor for Advanced Learning Technologies in the System Office, noted:

> *By not having an advisory committee or a required integrated responsibility with other entities in the system office (like the chief information officer, like the person in charge of academic affairs) – to coordinate with those individuals and solicit their input, that probably hindered GLOBE's ability to move further faster. GLOBE may have had the idea, but because it didn't have broad support, other leaders effectively could – even by their lack of knowledge – slow the effort.*

The Ohio Learning Network reports to its own governing board, made up of chief academic officers from member institutions and the chancellor of the Ohio Board of Regents. This structure appears to make the VCU more directly accountable to its member institutions rather than to a system administration or board office. Kate Carey described the structure as follows:

> *We are a program of the Ohio Board of Regents, but we're not the Regents. We are related to the colleges but we're not one specific college. So unlike Texas, I am not a member of the system office staff. We're not like Kentucky – not part of a SHEEO organization. I think that gives me more opportunity to work with state policies for change because I'm not right there sitting at the board level. There are some ways in which I think it doesn't give me a close enough alignment because sometimes I don't have the perceived authority that our coordinating board has. So it's a two-edged sword.*

At perhaps the other end of the spectrum on VCU organizational structure, the University of Hawaii Distance Learning operation purposely describes itself as a "non-VCU." As David Lassner, chief information officer, put it:

> *We made a decision that distance learning, distributed learning and related outreach activities are central to the university both in terms of our mission and the way we provide services. So we're taking a conscious approach to mainstream the work typically done by a VCU. We want our whole university to be responsive to the changes in higher education. Many of these new challenges and opportunities lie at the core of our future, not on the margin where they can or should be delegated to a separate unit to take care of for all of us.*

University of Hawaii's decentralized approach is not unlike many VCUs that prefer a more integrated service model while providing centralized information via a website for students.

One of the central issues around organizational structure and governance for VCUs is accreditation. In the survey, respondents were asked to indicate their VCU's status regarding accreditation separate from their provider institutions. While some VCUs are accredited to facilitate the offering of joint degrees, none are accredited to offer degrees independently. Furthermore, not a single VCU indicated it had any plans to seek accreditation in the future. Some of the early VCUs considered and a few tried to implement this model, but after the highly visible fail-

ure of the Education Network of Maine's attempt to do so, most leaders concluded the political sacrifice was too high and chances of success too low.

Classification of VCUs by Type

As described earlier, the Wolf and Johnstone (1999) taxonomy for VCUs provided a useful way to distinguish among the VCU organizations. Survey respondents were asked to classify their organizations according to the characteristics of the four VCU types:

Type 1 – Degree granting
Type 2 – Centralized student services and academic articulation
Type 3 – Limited services; little or no articulation
Type 4 – Electronic course catalog; little or no services; no articulation

In *Table 2,* responding VCUs are classified into the four types. No VCU in this study can be considered a Type 1, degree granting VCU. A slight majority (53%) are considered Type 2 (centralized) VCU organizations. More than a third (35%) can be classified as Type 4 (electronic catalog) VCUs, while the smallest number of organizations fell into the Type 3 (limited service) category (12%).

Table 2: Classification of VCUs in Wolf/Johnstone Taxonomy

VCU Type	Number of Responses	Percent of Responses
Type 1 – Degree Granting	0	0%
Type 2 – Centralized	27	53%
Type 3 – Limited Service	6	12%
Type 4 – Distributed	18	35%
Total	**51**	

These findings suggest some changes in VCU designs since the Wolf and Johnstone taxonomy was created. The VCUs appear to be gravitating toward two distinctly different service models: one that is centralized and provides services to students, both administrative and academic; the other being more of a distributed service model, where the VCU hosts an online catalog, but institutions provide most of the services. The findings that follow generally support such a bifurcated system, though there is a great deal more texture woven into these models than may be initially apparent. In addition, two subgroups of the centralized and distributed VCUs emerged, which were distinguished by business-like characteristics, such as a drive towards self-sustainability, a focus on quality assurance, benchmarking, and standardization/scalability.

VCU Types by Sector

Table 1 (p. 15) shows the VCUs by institutional sectors served. When the primary sector served was compared against VCU types, an interesting pattern emerged. Almost all single-sector VCUs (all but one two-year; all but one four-year) were Type 2 (centralized). On the other hand, only 30% of the multi-sector VCUs were Type 2 (centralized). Type 4 (distributed) was by far the most dominant model among the multi-sector VCUs. One interpretation of this pattern would be that those VCUs with a strong focus on a particular sector (two-year or four-year) are more likely to have a centralized model. Those VCUs trying to serve the entire statewide spectrum are more likely to have a distributed model. However, there were nine multi-sector VCUs classified as Type 2, seven

of which report to a statewide governing board rather than a coordinating board. Therefore, if a multi-sector VCU operates under a centralized model, it most likely exists within an already centralized statewide higher education governance structure.

Services and Staffing

As one might expect, Types 2 (centralized) and 3 (limited service) VCUs provide more services than Type 4 (distributed) VCUs and thus generally have larger staffs. Among all 51 respondents, the most common services provided by the VCU (either in-house or outsourced) were "online catalog," "technical help desk," and "course hosting." The most common services provided by the VCU in collaboration with institutions were "marketing," "faculty/staff training," "online catalog," and "test/lab sites and proctoring." Type 2 (centralized) VCUs were more likely to offer "online application," "online registration," "bookstore," "e-commerce," and "library services" than Types 3 (limited service) and 4 (distributed). Eleven VCUs (22%) indicated they operate a student information system (SIS). Twenty-one VCUs (41%) operate a course management system or learning management system.

Respondents were asked to provide staff levels when the VCU was founded as well as current staff levels. Staff in most categories (senior administration, professional administration, administrative support, IT, instructional design/media) increased in number between the founding and current years. A notable exception was a shift from full-time (63% decrease) to part-time (55% increase) staff in the instructional design category. Type 3 (limited service) VCUs had the highest average full-time staff levels at 21.5, even with outliers eliminated from the analysis. Type 2 (centralized) VCUs reported an average full-time staff size of 14.0, while Type 4 VCUs reported an average full-time staff of 3.5 (see *Table 3*).

Table 3: VCU Average Staff Levels by VCU Type

VCU Type	Full-Time	Part-Time	Total
Type 2 – Centralized	14.0	7.4	21.4
Type 3 – Limited Service	21.5	8.0	29.5
Type 4 – Distributed	3.5	5.4	9.0

VCU Founding Leaders

In nearly half the responding VCUs (47%), the founding leader remains in that position. This is not too surprising, given that many of these organizations have only been around for three to five years. Yet one might expect greater turnover in positions that have been the subject of intense scrutiny in some states. An analysis of the turnover of founding leaders by VCU Type showed that the founding leader is least likely to remain in Type 2 (centralized) VCUs. Approximately half of all Type 2 VCU founding leaders are no longer in those positions. One-third of Type 3 (limited service) founding leaders have left, while one-quarter of Type 4 (distributed) founders have moved on. One interpretation of this finding would be that the more centralized the VCU, the more likely institutions feel threatened, and thus the more vulnerable the CEO. A significant number of VCUs were launched by strong and charismatic leaders – an advantage if the VCU was designed as a bold initiative to challenge the status quo, but equally a disadvantage if the VCU wants to stay off the radar screen. The survey data indicate 22% of VCUs had a single individual as the driving force behind the VCU's establishment.

Programs, Enrollments, & Students

Finding #2:

Most VCUs are expanding access to geographically underserved populations. Over half (52%) of responding VCUs reported that the majority of their students were physically at a distance from a campus. On the other hand, 42% of VCUs identified campus-based students as their primary users. While serving campus-based students has often been viewed as an unintended side effect of the VCU, it also represents a broadening of the definition of access.

- Multi-sector VCUs offer access to a broader range of degree programs than single-sector VCUs. Single-sector VCUs have limited degree programs, but provide a higher level of service to support those programs.
- More than half of VCUs do not collect or report enrollment data, especially "distributed" VCUs. Centralized VCUs are more likely to report enrollments, but variance is high. In some states, the VCU is a major producer of enrollments (10,000 or higher) for its member institutions. In others the numbers are scarcely noticeable (less than 1,000).

Degree and Certificate Programs

Responding VCUs provide access to a range of certificate and degree programs, with the associate degree being the most common degree available. *Table 4* displays the number of VCUs providing access to certificates, associates, bachelors, masters, and doctorate degrees.

Table 4: Degrees Listed by VCUs

Type of Degree/Certificate	Number of VCUs Listing	Percent of VCUs Listing
Certificate	25	49.0%
Associates	30	58.8%
Bachelors	22	43.1%
Masters	22	43.1%
Doctorate	5	9.8%

Within the certificate and degree levels, respondents were asked to list the degree programs that are most in demand and receive the highest levels of enrollment. The following programs represent the ones most frequently mentioned by VCUs.

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Certificate

- MS Office
- Information Technology
- Early Childhood
- Criminal Justice
- Health Professions

Associate Degree

- Business
- Criminal Justice
- General Studies

Bachelors Degree

- Business
- Nursing
- Health Professions
- Computers/technology
- (General Education courses mentioned among highest enrollments)

Masters Degree

- Business
- Engineering
- Education
- Nursing
- Computers/technology

Doctorate Degree (only two listed)

- Technology Management
- Education

In describing degree programs offered through the Michigan Community College Virtual Learning Collaborative, Executive Director Michael Wahl noted that most of the colleges started out by putting the general education curriculum online:

> *If you do an enrollment analysis you'll find that it's probably 90% gen ed courses. That's partially a function of what's available and it's partially a function of where students feel comfortable taking online courses. But the question in my mind – for community colleges – the real benefit to online is the ability to deliver the occupational programs online and to share in expensive, high-cost, low-enrollment programs. As far as I'm concerned we've really been doing the low hanging fruit and the real promise is still in the future.*

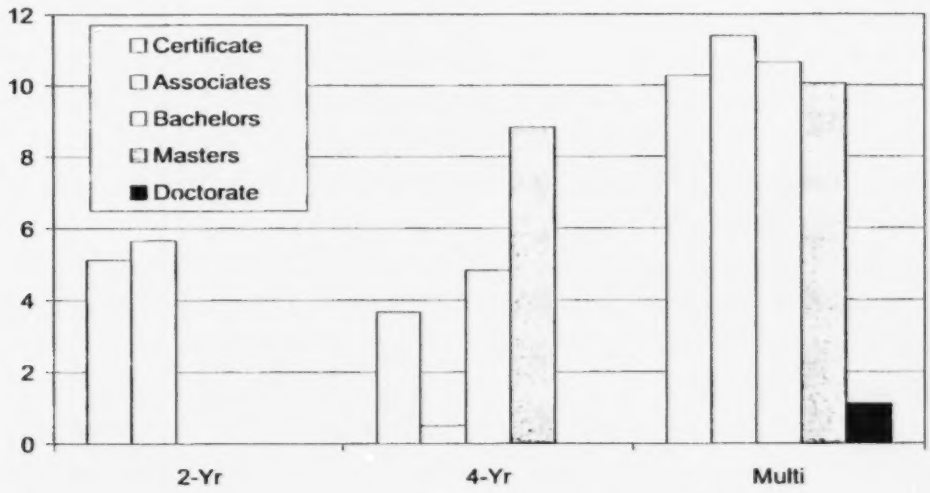
As institutions gain experience and comfort with their current online offerings, more advanced programmatic approaches (e.g., market analysis, industry partnerships, multi-institutional program development) are evolving, and being led by some VCUs.

Degrees by Sector

Multi-sector VCUs – those including a broader range of postsecondary providers – listed the highest average number of degrees in every category (certificate, associates, bachelors, masters, doctorate). *Figure 4* shows the average number of degrees listed by each sector of VCUs.

Since the multi-sector VCUs cover a broader range of institutions across the state, it is not surprising they would have more degrees available. In addition, as mentioned earlier, multi-sector VCUs are predominantly Type 4 (distributed), and therefore likely to be providing a "catalog" listing of degree programs available from institutions throughout the state. The single-sector VCUs, which are predominantly Type 2 (centralized), would likely offer more support and academic services around fewer degree programs.

Figure 4: Average Number of Degrees Listed by VCU Sector



Delivery Modes

Respondents were asked to identify the various modes of delivery for courses listed by the VCU. All 51 responding VCUs list or manage courses delivered via online/Internet-based technology. In fact, nearly 30% of VCUs indicated that online delivery is the only mode supported by the VCU. Some of the older distance learning delivery modes (e.g, ITV, satellite) remain a significant delivery vehicle for the majority of VCUs. More than half (57%) list courses offered by ITV (compressed video), with a significant number also listing courses delivered by satellite, cable, and correspondence. *Table 5* provides the number of VCUs that provide access through different delivery modes.

Table 5: Delivery Modes Available Through VCU

Delivery Mode	Number of VCUs	Percent of VCUs
Online	51	100%
ITV (compressed video)	29	56.9%
Satellite	17	33.3%
Cable	22	43.1%
Correspondence	18	35.3%
Classroom	8	15.7%
Traveling Teacher	6	11.8%

Enrollment

Twenty-three of the responding VCUs provided enrollment data for fall 2002. While the survey also asked for data on headcount, the numbers reporting were too few and the data not sufficiently reliable for interpretation. The enrollment data were more consistent, but it must be noted that counting and reporting methods are quite differ-

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Table 6: VCU Enrollment

Total enrollment for 23 VCUs reporting	240,188
Average enrollment for 23 VCUs reporting	10,443
Highest enrollment	40,014
Lowest enrollment	227

Table 7: VCU Enrollment Ranges

Enrollment Range	Number of VCUs reporting in range	Percent of VCUs reporting in range
Greater than 10,000	10	43.5%
5,000 - 10,000	4	17.4%
1,000 - 5,000	6	26.1%
Less than 1,000	3	13.0%
Total	**23**	**100.0%**

ent among the VCUs. For example, only nine VCUs (17.6%) count enrollments separately from their provider institutions. Students typically enroll through the provider campus, not the VCU. Therefore, the institution captures and reports the enrollment data. When the VCU collects enrollment information from the institution, the institution may provide enrollment data for all online courses, regardless of whether the student came through the VCU. This is especially the case for Type 4 (distributed) VCUs, where there is usually no way to track what happens to a student once they leave the VCU website. Type 2 (centralized) VCUs were more likely to track enrollment data (20 of the 23 VCUs reporting enrollments were Type 2) – presumably because they would have access to student information through the delivery of services. *Tables 6* and *7* show the enrollment information (for-credit only) as reported by the VCUs.

In addition to enrollment data, the survey requested information regarding course completion data. Fifteen VCUs (29%) reported that they were able to track course completion rates for students, while 35 VCUs (69%) said they did not track this data. Of those that do collect completion data, completion rates were generally in the 70% - 90% range. The lowest completion rate was 67% (with a C or better). The highest completion rate was reported at 96%.

VCU Students

Student participation in distance education has been reasonably well researched and documented during the past decade. Various studies have shown that distance education students tend to possess some distinctive characteristics, such as being older, having family responsibilities, and likely to be working full-time. The recent NCES study on distance education (July, 2003) indicated nearly 90% of all public institutions in 2000-2001 offered courses at a distance.

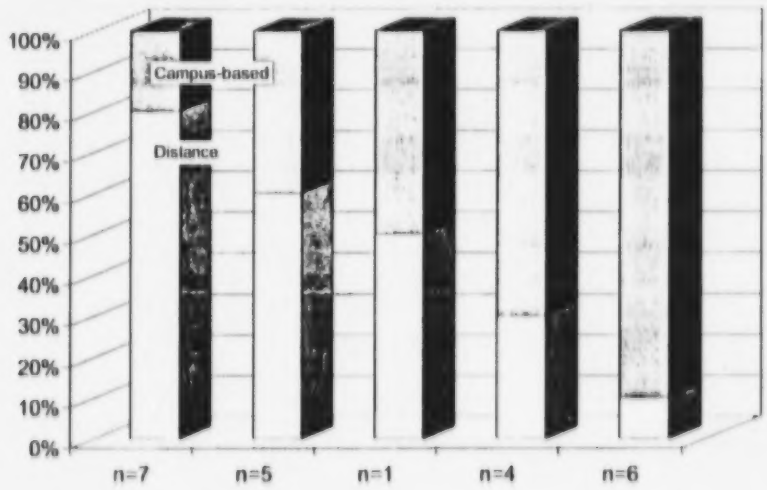
While it is clear that distance education has become a significant endeavor at many colleges, another NCES study (November, 2002) concluded that participation in distance education in 1999-2000 was relatively low compared to traditional classroom instruction. (Eight percent of all undergraduates and 10 percent of all graduate students took

courses via distance education.) Complicating this picture is another trend, which is the blurring of boundaries between traditional classroom and online instruction. Since 1999-2000, greater numbers of traditional, campus-based students (who do not fit the earlier characteristics of "distant" students) are participating in either partially or fully online courses.

How does the larger picture of distance education participation compare to student participation in distance education through VCUs? Virtual colleges and universities were created principally to increase access for those students who could not easily come to a campus, i.e., the original "distant" student. The initial idea was that students would be able to find (in one location) information about courses and degree programs available at a distance from institutions across a system or state. The more aggressive VCUs were expected to help pave the way for collaborative degree programs or at least facilitate more effective transfer of courses among the participating institutions.

While the VCU was not created with the traditional campus-based student in mind, it is clear that this student group is a large user of the VCU. Survey respondents were asked to estimate the geographic distribution of their students. The average percent of campus-based students (as reported by 23 VCUs) was 51%. Some reported percentages as high as 80% to 90% campus-based students. On the other hand, the majority of the reporting VCUs indicated they were primarily serving students at a distance from campus. As shown in *Figure 5*, 12 of the 23 responding VCUs reported a higher percentage of distant students than campus-based students. One reported a 50/50 split between campus and distant students, and 10 VCUs reported a greater percentage of campus-based students than distant students. Six (26%) of responding VCUs reported campus-based students at 90% or higher.

Figure 5: Estimated Geographic Location of VCU Students (n=23)



One example of a VCU serving primarily "distant" students is the Oregon Network for Education (ONE). Holly Zanville, Associate Vice Chancellor for Academic Affairs in the Oregon University System, described what she calls their "traditional distance ed population:"

> *We have a number of degree programs that are serving traditional distance ed populations in social work, public administration, MBA. Those programs have pockets of people in various rural locations around the state and those would not be considered our typical on-campus students. We built ONE with the universities that were very interested in programs. We were looking for cohorts of people – adults who wanted access to programs, not just a single course here or there to graduate.*

When comparing the geographic location of students by VCU type, Type 2 (centralized) VCUs were least likely to be serving distant students (average percent of distant students was 38.8), while Type 4 (distributed) VCUs were

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most likely to be serving distant students (average percent of distant students was 63.0). The researchers urge caution with this interpretation, however, because the number of Type 4 VCUs that reported geographic distribution was relatively low. Of the ten VCUs reporting a higher percentage of campus-based students, five (50%) were two-year VCUs and five (50%) were multi-sector VCUs.

Another angle from which to view VCU students is whether they are taking courses primarily from a single institution or from multiple institutions. Based on 22 reporting VCUs, the average percent of students taking courses from a single provider is 78.9%. This issue appears to be unrelated to the geographic location of the student. A campus-based student is probably more likely to take online courses from his or her home campus (though they may supplement if the home campus doesn't offer a desired course). At the same time, "distant" students also are likely to be taking courses from a single provider since the majority of online degree programs are offered by single institutions. The high percentage of VCU students taking courses from a single provider may be the result of the small number of collaborative degree programs available. Where the more successful collaborative degree programs exist, the VCU usually tries to make the coordination among institutions transparent to the student. For example, the student registers at his or her "home" college and may not know that the instruction is being delivered by a faculty member at another institution. In Georgia, six institutions collaboratively offer an "e-Core" curriculum. According to Kris Biesinger,

> *The faculty member who teaches those courses could come from any institution in the system. Six institutions are offering credit and each is offering credit for the same course. So they're not necessarily putting up the faculty member – but they are offering the credit for it. To the student it looks like they are getting the course from their own institution – but in reality it's coming from multiple sources potentially.*

Similarly, UT TeleCampus has facilitated collaborative degree programs among its member institutions. As Darcy Hardy noted,

> *When we started building the collaboratives, we went off the deep end early and built the MBA Online, involving eight independent campuses. Most of our students are now in collaborative programs, thus they are taking courses from multiple campuses. At the undergraduate level, most students are campus-based, yet the courses they take through the TeleCampus may or may not originate from their home institution. At the graduate level, most students are geographically at a distance from campus.*

VCUs serve students at numerous levels, ranging from high school through graduate levels. As shown in *Table 8*, the largest student level is undergraduate, followed by graduate level.

Table 8: VCU Student Levels

Student Level	Number of VCUs Serving	Average Percent of VCU Student Body
High School	16	7.7%
Adult Education (GED/pre-college)	8	27.5%
Undergraduate	34	69.9%
Graduate	21	28.2%
Professional/Continuing Education (non-credit)	12	8.0%
Other	2	7.0%

The question of "Who is the VCU serving?" seems to have generated a great deal of interest among policymakers and leaders in the higher education community. A recent report supported by the Pew Charitable Trusts and the Center for Academic Transformation asserts that VCUs should focus on increasing access for "new" students rather than serving existing on-campus students who are time-shifting a portion of their courses from classroom to online (Twigg, 2003). Data from the present study, however, suggest that the majority of VCUs (52%) already are focusing on non-campus-based students, though a significant number do predominantly serve the "time-shifters." The debate over campus-based versus "new" students, in the researchers' view begs the question, "does it matter?"

Policymakers and higher education leaders created VCUs with the primary goal of expanding access. Campus-based students are taking online courses via the VCU for good reasons. It may be helping them complete their degree in a more timely manner (certainly not objectionable to most policymakers). It may be allowing them to take courses they otherwise could not take because they are working part-time or full-time. Their learning styles may be better suited to online courses, and the VCU offers an expanded selection. The goal of expanding access is still being served. "Convenience" has been much maligned as somehow taking away opportunities from those who really need access. But convenience, in the researchers' view, is quickly becoming a new element in the definition of access.

Furthermore, a sizeable market is needed to drive down costs. That which provides vital access for a few can provide ubiquitous convenience for many. It is not until the economy of scale, created by meeting the needs of the many, is realized that the solution becomes cost-efficient for the few.

Financing of Virtual Colleges and Universities

Finding #3:

Most VCUs were initiated with direct or in-direct state appropriations, and continue to rely heavily on this funding source for operations. However, there is emerging evidence that some VCUs are building sustainable revenue streams as reliance on direct and in-direct allocations decreased slightly and the role of tuition and service fees increased slightly since founding.

- While there is a wide disparity among VCU funding levels, approximately one quarter of VCUs are self-supporting.
- A subset of VCUs (20%) report annual funding of "zero dollars," indicating the presence of "boot-strapping" in establishing the funding for some VCUs.

The amount of funding put behind an initiative indicates both the commitment to the effort and the level of impact expected to result. It is clear that different VCUs are funded at different levels. Some VCU efforts were initiated with multi-million dollar investments. Some with virtually no up-front investment at all.

Initial Capitalization

Table 9: VCU Initial Capitalization

Initial VCU Capitalization Range (n = 29)	
Over $1 million	10
Between $500,000 and $1 million	9
Below $500,000	10

Of the 29 VCUs that reported they received an initial capitalization, the simple average for start-up funding was about $2,400,000. But this was skewed upwards by the 10 VCUs that reported an initial capitalization of over $1,000,000, two of which reported initial funding at $15,000,000 and $30,000,000 (the next highest VCU capitalization was $3,000,000). With the two outliers removed, the average initial capitalization was $908,110. Nineteen VCUs were funded below $1,000,000 with 10 of those receiving initial funding of less than $500,000.

The most common funding used to start VCUs was direct appropriations. Beyond this initial funding, VCUs used other (in-direct) allocations, trade-outs or reassignments of personnel and resources (in-kind support) and levied membership and service fees from the participating instructional providers and institutions to support their start-up phase.

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Table 10: Initial Capitalization Funding Sources (n=29)

Rank	Founding Funding Source
1	Direct state appropriation
2	Indirect state appropriation
3	In-kind support
4	Membership fees
5	Service Fees (institutions)
6	Partial tuition
7	Service Fees (customers)
8	Donations/partnerships
9	Tuition
10	FTE funding from state

These types of funding indicate the "boot-strapping" that appears to have occurred as these innovations came to life. In all but 10% of the cases VCUs were not expected to repay the funding agency for start-up costs.

Annual Operating Funding

The amount of funding a VCU receives to start-up is important; however, the funding it receives to maintain its operations is critical to effectively meeting goals. Because of the wide range of annual funding level, and the impact funding can have on roles and effectiveness, an analysis was conducted of find useful groupings of VCU budget levels. The analysis resulted in classifications of VCU annual operating budgets into four levels: those VCUs with budgets greater than $1million ($1M+), those between $1 million and $500 thousand ($1M-$500K, those with less than $500 thousand (<$500K), and those with zero budget. The resulting four budget levels were used in subsequent analyses to test for the differential effect of funding on VCU attributes.

Table 11: VCU Annual Operating Funding

VCU Annual Operating Funding (n = 51)	
Over $1 million	10
Between $500,000 and $1 million	9
Below $500,000	10
Budget = "None"	10
No budget reported	3

The sub-set of 10 VCUs that reported "no budget," established with whatever existing personnel and resources are available, suggests either an augmentation, addition, or re-purposing of existing mission and assignments to encompass the goals and tasks of a VCU.

Table 12: Ranking of Founding to Current Funding Sources

Rank	Founding Funding Source	Current Funding Source
1	Direct state appropriation	Direct state appropriation
2	Indirect state appropriation (e.g., funding flows through institution)	Indirect state appropriation (e.g., funding flows through institution)
3	In-kind support	In-kind support
4	Membership fees	Membership fees
5	Service Fees (institutions)	Service Fees (institutions)
6	Partial tuition	Tuition
7	Service Fees (customers)	Partial tuition
8	Donations/partnerships	Service Fees (customers)
9	Tuition	FTE funding from state
10	FTE funding from state	Donations/partnerships

The VCUs were asked to rate the importance (from "none" to "primary") of funding sources both at founding and for current operations. While the overall rating of the five leading funding sources remained the same, the VCUs rated "direct state appropriations" slightly lower in prominence than at founding. Another trend is an increase in the role of tuition fees and service fees from institutions. Revenue from tuition saw the greatest rise in prominence between founding and current sources while the importance of revenue from donations and partnerships dropped. This seems to indicate a slight "maturing" and success of the financial models of the VCUs as they begin to build revenue streams and reduce their reliance on annual appropriations.

Table 13: Ranking of Current Funding Sources by VCU Type

Current Funding Source	All VCUs	Type 2 (centralized)	Type 3 (limited service)	Type 4 (distributed)
Direct state appropriation	1	1	1	3
Indirect state appropriation	2	2	3	1
In-kind support	3	3	9	2
Membership fees	4	4	4	4
Service Fees (institutions)	5	5	2	5
Tuition	6	7	6	6
Partial tuition	7	6	10	9
Service Fees (customers)	8	8	7	8
FTE funding from state	9	9	8	10
Donations/partnerships	10	10	5	7

Based on their rating of current funding sources, Type 2 (centralized) VCUs were more likely to get some funding from partial tuition splits than other VCU Types. Type 4 (distributed) VCUs were the least likely to receive funding from service fees to customers and FTE funding from the state. In general, however, there were few strong differentiating funding sources between the three VCUs types, perhaps indicating, while maturing from reliance on appropriations to tuition, that the financial models have yet to become clearly defined with a relatively mixed and experimental bag of revenue streams below direct and indirect appropriations.

Table 14: Ranking of Current funding sources by VCU Budget Level

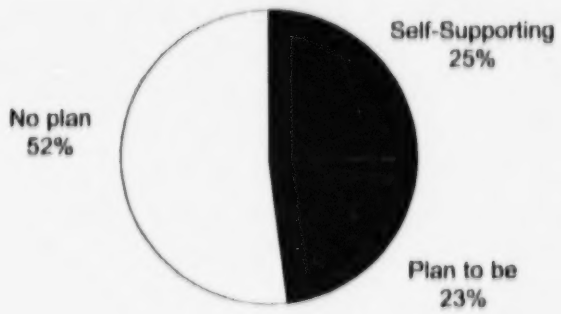
Current Funding Source	All VCUs	+$1M	$1M - $500K	<$500K	No Budget
Direct state appropriation	1	1	1	2	6
Indirect state appropriation	2	3	2	7	1
In-kind support	3	5	4	4	2
Membership fees	4	10	3	1	9
Service Fees (institutions)	5	2	6	3	5
Tuition	6	8	7	5	3
Partial tuition	7	4	8	8	7
Service Fees (customers)	8	6	5	9	4
FTE funding from state	9	9	9	6	8
Donations/partnerships	10	7	10	10	10

When viewed by budget level, the differences in funding philosophy become more evident. As may be expected, direct state appropriations were the most highly rated source of current funding by the $1M+ VCUs and the $1M-$500K VCUs. While direct appropriations were still important to the <$500K (it was the second most important source behind membership fees), it only ranked 6th for VCUs with "no budgets."

$1M+ VCUs also rated partial tuition more highly than other VCUs. There was a trend evident in reliance on tuition – the lower the budget level the more highly rated tuition was as a funding source from 8th by $1M+ VCUs to 3rd by "no budget" VCUs. The more highly funded VCUs are currently more dependent upon allocated funding, though they appear to be identifying revenue streams, such as partial tuition. This may indicate an evolution towards other revenue streams that would result in a sustainable, self-reliant business model over more traditional revenue models emphasizing annual funding.

Will any of the VCUs ever be able to pay for themselves? Remarkably, when asked if the VCU planned to break-even, 12 VCUs reported that they were currently self-supporting and 11 reported plans to become self-supporting in the future. Twenty-five VCUs reported they did not intend to become self-supporting.

Figure 6: VCUs Currently Self Supporting



The motivation to become self supporting was strongest among the more decentralized VCUs. Twice as many Type 4 (distributed) VCUs (38%) were currently self-supporting versus 17% of the Type 2 (centralized) and 17% of the Type 3 (limited service) VCUs. It was also apparent that, the less budget a VCU had to work with, the more likely it was to be self-supporting as 40% of the "no budget" VCUs reported. Presumably this owes to the "boot-strapping" nature of their funding – that they could only spend what they were able to raise in funding. Conversely 32% of the <$500K VCUs, none of the $1M-$500K VCUs, and only 17% of the $1M+ VCUs were currently self-supporting.

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VCU Goals in Transition

Finding #4:

Out of 20 goals studied at the VCU's founding and at present, current goals appear more attuned to increasing state/system higher education efficiency and meeting state workforce needs. While still among the highest priorities, providing access and serving the underserved (the traditional goals of distance education) have declined slightly in importance.

- The largest increases in importance between founding and current goals were those related to higher education efficiency: increasing communication and collaboration, developing new courses and programs, leading in new learning technologies, and reducing costs.
- Seeing nearly as large an increase were goals that emphasized meeting state workforce and economic needs, such as creating a better educated workforce and increasing economic development.

The founding goals of the VCUs reflect the focus of these agencies and leaders. The impact of the arguments and goals of traditional distance education, crystallized in the vision of WGU, is also evident. VCUs almost always (84%) had a primary individual or group as sponsor. Two-thirds of the time this was a state or system board, or a President's Council, and one-third of the time it was an individual.

The VCUs were asked to rate the importance of a set of 20 goals when the VCU was founded. The primary founding goals for VCUs echo the motivations and justifications of previous distance education delivery technologies and the focus on the "problems" these technologies promised to solve. Sixty-seven percent of VCUs report they were created to "solve problems." These problems appear to be getting education to distant learners that had not previously been served by traditional institutions.

The solution most identified as a goal by the states, that would "improve the response to state needs," was one-stop shopping, a capability they intended to provide through a local VCU. These developments were, in some sense, also an effort to "keep up with the Joneses," as 10% of the VCUs reported they were created because other states had created VCUs.

Goals in Transition: Changes between Founding and Current

It is still early in the lifecycle of VCUs. External change around the VCUs has been significant. Since their inception VCUs have existed within an environment of rapidly increasing technological capabilities for teaching and decreasing perceptions about the commercial viability of Internet-delivered instruction. Since the announcement of WGU, a whole market segment – the online, for-profit initiatives such as NYUOnline, Fathom, and the U.S. Open University, have come . . . and largely gone. How has enormous change in the role of the internet in higher education and the expertise of the individual institutions at using it changed the expectations of the VCUs?

Today VCUs appear to be emphasizing goals more attuned to state/system higher education efficiency as well as meeting state workforce needs and emphasizing less the traditional (access and underserved) goals of distance education. The strength of the "expand access" argument is still evident across all three VCU Types as they all rate it as the dominant founding goal. Expanding access remained the predominant goals across all budget levels except the $1M to $500K level, where it was rated second behind "provide a local VCU."

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Table 15: Comparison of Top Ten Founding and Current Goals

Founding Goals	Current Goals
1. Expand access	1. Expand access
2. Serve underserved populations	2. Increase communication/ collaboration
3. Provide a local VCU	3. Create better educated workforce
4. Provide one-stop shopping for higher education courses	4. Serve underserved populations
5. Improve the higher education response to state needs	5. Provide one-stop shopping for higher education courses
6. Create better educated workforce	6. Improve response to state needs
7. Increase communication and collaboration	7. Foster collaborative course/ program development
8. Foster collaborative course/ program development	8. Provide a local VCU
9. Increase economic development	9. Lead in new learning technologies
10. Provide statewide faculty development	10. Increase economic development

At the same time, "expanding access" (while still remaining the most important goal across the VCUs) dropped slightly in importance (-3%), while "serving underserved populations" dropped 1%. However, in a period of technology settling and economic downturn, this may be a more a lowering of the rhetoric of distance education while emphasizing the goals of creating a more efficient instructional delivery system for state postsecondary education and helping the state's citizenry get jobs. VCU leaders interviewed noted that "access" is more of an assumption now, while the rise in other goals represents a broadening of vision for the VCU.

"Provide a local VCU," and "provide one-stop shopping" decreased in emphasis (though these decreases were slight at -6% and -2%) - presumably because the establishment of the VCU and it's early development had satisfied that goal.

The largest increases in importance between founding and current goals were those related to higher education efficiency: "increase communication and collaboration" (+9%); "develop new courses and programs" (+9%); "lead in new learning technologies" (+8%); and "reduce costs" (+7%) -- all of which support the growth and efficiency of a state or system's network of higher education providers. This emphasis was highest in the "no budget" level VCUs who indicated their second highest founding goal was "increase communication and collaboration," while the other budget levels did not rate this goal highly enough to make their top five.

Seeing nearly as large an increase were goals that emphasized meeting state workforce and economic needs, such as "create a better educated workforce" (+7%). VCUs at the highest and lowest budget levels rated state economic and workforce goals most highly of the VCUs. The 1M+ VCUs rated "increase economic development," "create a better educated workforce," and "improve the response to state needs" all in the top five goals. VCUs with "no budget," while not rating all in the top five, rated these goals highly as well.

The VCU Role in Policy Change

Finding #5:

The majority of VCUs (63%) are expected to play a role in system or state level policy change related to distance learning.

- VCUs believe their greatest impact on policy change has been in supporting inter-institutional collaboration.
- Centralized VCUs reported greater impact across the areas of tuition policy, duplication, articulation, and transfer than did distributed VCUs.
- Over half of the VCUs stated that assuring the quality of online courses was solely a provider concern. Centralized VCUs were more than twice as likely to review and approve courses than distributed VCUs.
- Less than half the VCUs played a role in standardization or scalability of VCU courses. Almost two out of three centralized VCUs were active in these issues, while only one in four distributed VCUs were likely to take a role in standardization and scalability issues.

However they elect to accomplish the goals and expectations that have been set out for them, VCUs are, at their core, instruments of change. The entrepreneurial, change agent spirit runs strong at the VCU. This role can be accomplished in many ways. A VCU can operate as a disruptive innovation, being the "techno-hare" out in front of the (presumably slow moving) traditional higher education institutions, leading in the use of technology. They can be the incubator, the alpha and beta-site for development of online course and program pilots and new business models, surrounding these new efforts with the services and support mechanisms for success. VCUs can also serve as the "catalyst for change," focusing on increasing the efficiency of the institutions and the system they serve by asking difficult questions publicly and creating the initiatives to address them. In fact, ten percent of VCUs indicated that they had been established to "create or exacerbate – and therefore force confrontation of difficult policy issues."

Whatever role (or combination of roles) a VCU assumes, it is the rare VCU that has no role in the postsecondary education policy issues of the state or system to which it belongs. Only about 10% of VCUs reported having no specific role in their state or system's policy discussions. Sixty-three percent of VCUs said they identified and prompted policy discussions, with about half of all VCUs reporting that they initiated the formation of issues and were expected to lead the discussions.

Type 3 (two-thirds) and Type 2 (half) VCUs were most likely to initiate and lead policy discussions while slightly less than one third of Type 4 (distributed) VCUs reported having this expectation. Just over one in four (28%) VCUs indicated they were expected to develop policy as a model for other institutions. The more centralized the VCU, the more active role it assumes in state/system policy discussions and the more likely its policies will be expected to serve as models for other institutions in the state/system. Being a part of the policy discussion is clearly an expectation of the VCU. Has this participation resulted in policy change?

There are two types of policy issues that this study examined. The first issues are the traditional concerns of state and system offices: tuition, duplication, articulation, transfer, and inter-institutional collaboration issues. The sec-

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ond issues are those raised by the use of new models of instruction including quality assurance, standardization and scalability, and ADA compliance.

Traditional Issues of Distance Education

Tuition Policy: The more centralized a VCU, the more likely it believes it has had an impact on institutional tuition policy change. This is tempered somewhat by where the tuition setting authority lies. When tuition is set by the state (as 22% of the VCUs indicated) policy changes require greater effort, making change less likely. When the institutions can set the rates themselves, as 53% of the VCUs indicated was their situation, then change can occur more rapidly, sometimes based on single programs. Ten percent of the VCUs reported they determined the tuition. Only 4% of VCUs reported having in place a statewide tuition "e-rate," as has been advocated by SREB and publicized by Georgia's former Governor Barnes.

In this environment of limited opportunities to change policy, and only five years or less since inception, only one in four VCUs reported that tuition policy had changed as a result of the VCU. The more centralized a VCU (31% of Centralized versus 12% of Distributed) the more frequently they reported that tuition policy had changed as a result of the VCU.

Duplication: The impact of VCUs, to date, on provider duplication issues is low, with only one in three rating impact as a "4" or "5" on a five-point scale. Thirty-seven percent of VCUs felt they had made no impact on duplication issues. Type 4 (distributed) VCUs were most likely to rate their impact as "none" while Type 2 (centralized) VCUs had the highest percentage of "4" and "5" ratings. In general, when broken out by budget level, the more a VCU had to spend, the more impact it reported having on duplication of courses and programs. The $1M+ VCUs rated themselves significantly above average impact when compared to all budget levels. The $1M-$500K VCUs rated themselves below the average, the <$500K VCUs at the average, and the "no budget" VCUs rated themselves significantly below average.

Articulation and Transfer: According to the VCUs the status of articulation agreements are stronger today than when the VCU was founded. Here again, the centralized VCUs perceived themselves as having a stronger effect on articulation agreements than Type 3 (limited service) and Type 4 (distributed) VCUs. This perception is due solely to the Type 2 (centralized) VCUs who reported a significant (20%) increase in the strength of the agreements; Type 4 (distributed) VCUs reported a slightly negative change; and Type 3 (limited service) VCUs reported almost as significant a decline (-17%) in articulation strength as the Type 2 (centralized) VCUs reported an increase. By budget, the more money a VCU received in funding, the more effective it rated itself at changing transfer policies.

Inter-institutional Collaboration: If VCUs are going to help increase the efficiency and effectiveness of institutions in their state/system they must increase the level of collaboration between the institutions. VCUs felt they were making a bigger impact on inter-institutional collaboration (a foundation to addressing other more knotty policy issues) than on some other policy issues. When asked to assess the impact of the VCU on institutional and provider operations, the VCU's rating of change for inter-institutional collaboration (3.6 on a five-point scale) was significantly higher than the rating for duplication or transfer issues (each of which were rated 2.2 on a five-point scale). Thirty-one percent of the VCUs reported that "significant" inter-institutional collaboration change had occurred as opposed to only 3.9% for duplication and 2% for transfer.

The Type 4 (distributed) VCUs did not see themselves having the same effect on their constituencies as the other style VCUs. They rated the policy change as a result of their VCU as a 2.3 on the five-point scale while the Type 2 (centralized) VCUs rated the change at 4.1 and the Type 3 (limited service) VCUs at 4.4. Budget level, once again, proved a reliable indicator of perceived change as a result of the VCU. The $1M VCUs assessed themselves as having a significant impact with two out of three rating themselves a "4" or "5." The $1M-$500K and <$500K budget levels assessed their impact at about the average of all VCUs, and the "no budget" VCUs reported they were significantly less effective than the other three budget levels at changing inter-institutional collaboration.

Modern Issues of the VCU

Quality Assurance: If not the first question asked about distance education, invariably the second will be "What about the Quality?" In general, the role of assuring the quality of online courses was a provider concern. Just over half of the VCUs (one in three Type 2, all Type 3, and one in two Type 4) stated that assuring the quality of online courses was solely a provider concern. This did not mean the VCUs were not involved. Of the VCUs, 20% reported a very active role, reviewing and approving all courses, and an additional 12% reviewed all or some courses. Twenty-eight percent required the provider review the courses, and half of those (14%) required the provider "certify" the quality of the courses. The most active VCUs were Type 2 (centralized), who were more than twice as likely to review and approve courses than Type 4 (distributed) VCUs. Type 2 (centralized) VCUs also were four times more likely than Type 4 (distributed) VCUs to require that the *provider* review and certify quality.

Standardization and Scalability: The concept of "design once – teach many times" model of course construction, intended to be more cost/time efficient, and the idea of being able to add multiple sections to an advertised course as enrollments grow are two of the more aggressive concepts of distance learning. In general, the VCUs reported low activity in developing or implementing these models. Over half (51%) of VCUs indicated they played no role in standardization or scalability in their state. About 20% encouraged large-scale, high enrollment courses, while 12% required master courses in order to restrict duplication of course development efforts. About 16% said they supported the use of adjunct faculty to teach online, a critical component to being able to add instructors in a manner scalable with demand.

Type 2 (centralized) VCUs thus were the most active with almost two out of three taking a role in standardization and scalability issues while Type 4 (distributed) VCUs were least likely (one in four) to take a role in standardization and scalability issues. Type 2 VCUs were far more likely to require master courses or provide and require the use of templates. They were also most likely to support the use of adjunct faculty. Type 3 (limited service) VCUs were most likely to encourage large-scale, high-enrollment courses.

ADA/Section 508 Compliance: The issues surrounding the accessibility of online instruction are just now beginning to come to the fore in many distance education operations. And while two out of three VCUs viewed this as primarily a provider issue, only 18% required that the provider review courses for compliance. Two VCUs required that the provider review and certify accessibility and 6% of VCUs reviewed and/or approved the accessibility of courses themselves.

Issues of the Online Delivery Model: A VCU must take on issues related to the online delivery model in order to be successful. These issues have existed within the context of traditional, classroom delivered instruction, but the glare of new models raises them anew, often from a different, more urgent perspective. Given the highly consortial nature of the VCU, ensuring communication and collaboration is a critical element for success. In addition to addressing the quality of online learning, a new and unproven delivery mode and commodity must be addressed. And, as the pressure for efficiency grows, the VCU models must address questions about how to reduce duplication of development costs through standardization and how to increase instructional capacity through the exploration of more scalable course models.

While the VCU may not be an ideal venue for the energy-sapping debates of state and system policy, the VCU sometimes finds itself the only advocate for change in the interest of distance learners. When a VCU initiates a high profile distance program, there are no local advocates to champion the resolution of policy issues. The VCU is left with the decision to either spearhead the resolution itself - or see the needed program die from lack of appropriate policy and process. Most have decided (or been directed) to help bring about policy change.

Progress and Impact

Finding #6:

In general, the higher a VCU's funding level, the higher it perceived its overall goals had been met. Further, the more highly funded and more centralized it was, the greater the impact on policy change (tuition policy, duplication, articulation, and transfer) a VCU was likely to report.

- Only one in five VCUs has identified other VCUs to benchmark against. Another 20% expressly stated they saw no competition for the VCU.
- VCUs vary in their measurement of progress towards their goals. The most highly rated goal for VCUs, "expanding access" is also the goal VCUs measure most.
- Three highly rated and rising goals (increase economic development, provide for a better educated workforce, and improve the higher education response to state needs) are among the goals VCUs measure least.

Measuring VCU Goals

Table 16: Goals VCUs Measure Most

Top Five Goals Measured	# / %
1. Expand access	24 / 47.1%
2. Provide one-stop shopping for higher education courses	20 / 39.2%
3. Foster Collaborative Development	19 / 37.3 %
4. Provide statewide faculty development	19 / 37.3 %
5. Develop new courses and programs	18 / 35.3%

VCUs vary in their measurement of progress towards their goals. It is perhaps reassuring to note the correlation that the most highly rated goal for VCUs, "expanding access" is also the goal VCUs measure most. But only 24 of the 51 VCUs report measuring progress towards the goal. Type 3 (limited service) VCUs (83%) are most likely to measure "expanding access," Type 2 (centralized) VCUs second (59%), and Type 4 (distributed) VCUs least likely (13%).

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Table 17: Goals VCUs Measure Least

Goals Least Measured	# / %
1. Reduce time to degree	4 / 7.8%
2. Acquire external degree programs	4 / 7.8%
3. Increase economic development	6 / 11.8%
4. Manage distributed resources	7 / 13.7%
5. Better educated workforce	8 / 15.7%
6. Improve higher ed response to state needs	8 / 15.7%

Three of the goals measured least (increase economic development, better educated workforce, and improving the higher education response to state needs) are highly rated, and rising, goals that the VCUs identify for themselves. Certainly there is difficulty, some would say impossibility, to measuring the impact of a VCU on such diffuse goals. One other highly rated goal, "serving underserved populations," was measured by 16 or 31% of VCUs.

VCU Benchmarking

Another perspective on how a VCU measures itself is provided through analysis of the question "has the VCU identified other VCUs that it benchmarks against?" Only one in five VCUs has identified other VCUs to benchmark against. The VCUs most commonly named were (in no specific order) Michigan Virtual University, University of Texas TeleCampus, Ohio Learning Network, Connecticut Distance Learning Consortium, and Kentucky Virtual University. These "benchmark VCUs" are either Type 2 (centralized) or Type 3 (limited service) VCUs and are all in the $1M+ funding level. Type 3 VCUs were more likely to have picked benchmarks (one out of three), followed by Type 2 VCUs at one out of five, while only about one in nine Type 4 (distributed) VCUs reported they benchmarked themselves against other VCUs.

Table 18: VCU Benchmarking

Does VCU Benchmark?	All VCUs	Type 2 (centralized)	Type 3 (limited service)	Type 4 (distributed)
Yes, the VCU has identified other VCUs it benchmarks against	20%	21%	33%	13%
No, the VCU has not identified other VCUs it benchmarks against	69%	76%	50%	63%

VCU Competition

In an era supposedly driven by the fear of interloper corporations grazing the campus for students – only 14% of VCUs acknowledged identifying these national providers as competition. Most interestingly, in response to the open-ended question "What entities does the VCU regard as its external competitors," 20% of the VCUs pointedly replied "none." This high percentage of "none" was consistent across all three VCU Types. Twelve percent of the VCUs

acknowledged they had in-state competitors, with out-of-state and "other" providers each gaining attention from 6% of the VCUs. In general, Type 2 (centralized) VCUs were more elevated in their attention to all types of competition while Type 3 (limited service) VCUs were generally less likely to identify competitors in any of the categories.

Figure 7: VCUs Most Commonly Benchmarked

VCUs Most Commonly Benchmarked:

Michigan Virtual University

University of Texas TeleCampus

Ohio Learning Network

Connecticut Distance Learning Consortium

Kentucky Virtual University

Meeting VCU Goals

As shown in *Table 19*, the VCUs reported low progress at meeting some of their most highly rated goals. Of the top five current goals only three were rated as one of the top goals successfully met. Two of the top five goals, "serve underserved populations" and create a "better educated workforce" were rated in the bottom half of goals VCUs felt they were accomplishing. Many of the goals for which VCUs rated their level of accomplishment low were similar in nature. These low accomplishment goals were ones that focused on impacting broad, diffuse, state-level goals such as improving the higher education response to state needs and increasing economic development. These also are goals that VCUs had difficulty measuring.

Table 19: Ranking the Degree to Which VCU Goals Have Been Met, by VCU Type

1= goal most met - 20= goal least met

Goals Met by a VCU Type (x) = top five overall current goal rating	**All VCUs**	**Type 2 (centralized)**	**Type 3 (limited service)**	**Type 4 (distributed)**
Expand access (1)	1	3	1	6
Provide a local VCU	2	1	9	3
Increase communication/collaboration (2)	3	2	5	7
Provide one-stop shopping for HEd courses (5)	4	4	2	9
Provide statewide faculty development	5	7	8	2
Foster collaborative m development	6	9	7	1
Lead in new learning technologies	7	10	4	19
Reduce costs	8	11	6	8
Manage distributed resources	9	6	10	18
Centralize resources	10	5	12	17

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Table 20: Ranking the Degree to Which VCU Goals Have Been Met, by Budget Level

1= goal most met - 20= goal least met

Goals Met by Budget Level (x) = top five overall current goal rating	**All VCUs**	**+$1M**	**$1M - $500K**	**<$500K**	**No Budget**
Expand access (1)	1	9	4	1	3
Provide a local VCU	2	1	1	5	15
Increase communication/collaboration (2)	3	2	3	6	18
Provide one-stop shopping for HEd courses (5)	4	4	2	7	9
Provide statewide faculty development	5	5	10	2	19
Foster collaborative m development	6	3	15	11	2
Lead in new learning technologies	7	7	5	10	17
Reduce costs	8	10	6	8	11
Manage distributed resources	9	16	9	3	16
Centralize resources	10	14	11	4	12

The goals VCUs rated themselves most successful at meeting were typically those that related to improving the ability of institutions to produce instruction efficiently, such as increasing communication and collaboration, providing statewide faculty development, and fostering collaborative program development. In addition, one very consistent trend was that, regardless of how the goal of acquiring external degree programs was viewed – in aggregate, by VCU type, or by budget level – all VCUs rated this as the goal they had met least.

Type 4 (distributed) VCUs reported especially low success at leading in new technologies, as well as centralizing and managing distributed resources. This seems in keeping with their more decentralized focus. Type 4 VCUs also rated themselves significantly more effective at some of the more difficult goals such as "improving the response to sate needs" and especially "acting as an entity less restricted by policy barriers." Type 2 (centralized) VCUs, consistent with their centralized nature, rated themselves as more effective at "centralizing" and "managing resources." They also rated themselves as significantly less successful at "being less restricted by policy barriers." Interestingly the Type 3 (limited service) VCUs rated themselves far more successful at meeting economic development goals than the other VCU types.

When viewed by budget level (see *Table 20*), once again only three of the top five goals that VCUs said they were currently focusing on made it into the top five goals according to level of accomplishment. The more highly funded $1M+ VCUs felt they had been far less successful at expanding access than their lower funded peers. However, they rated themselves more effective than average at fostering collaborative development. This was also true for the "no budget" VCUs, indicating that emphasis might be as important as funding in encouraging inter-institutional collaboration. In fact, the "no budget" VCUs presented a very different picture of goal accomplishments than the other VCUs. They rated themselves dismally behind the others in providing a local VCU, possibly because there is no funding. They also rated their success at "increasing communication and collaboration" and "providing statewide faculty development" near the bottom of goals accomplished as well.

Meeting Overall VCU Goals

Figure 8: Degree to Which Current Goals Have Been Met, by VCU Type

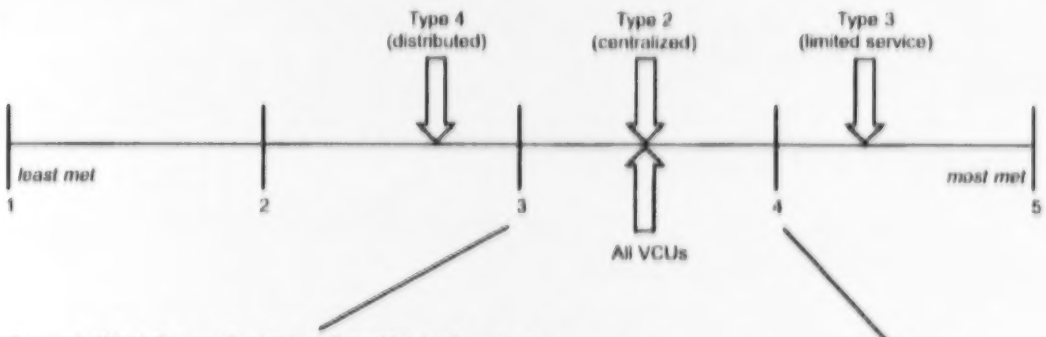
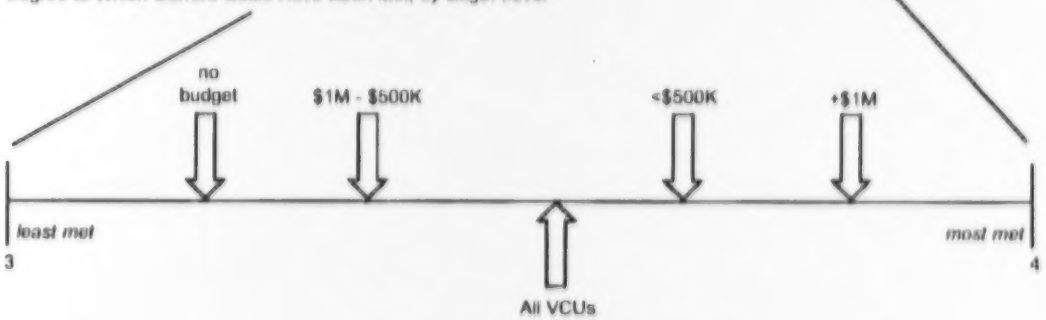


Figure 9: Degree to Which Current Goals Have Been Met, by Buget Level



In general the higher a VCUs funding level, the higher it rated its impact. The exception being the $1M-$500K VCUs which rated themselves slightly lower than the <$500K VCUs. It is clear that some types of VCUs – the more highly funded, and the more centralized – rate themselves as having a greater impact on statewide, systemwide policy issues. The Type 2 (centralized) VCU views itself as more effective at impacting policy – and the Type 4 (distributed) as least effective.

By budget, the more highly funded VCUs consistently rated themselves significantly above the average of all VCUs at changing duplication, transfer, and collaboration for their institutional provider/partners. The trending was generally clear that the lower funded VCUs arrayed below the $1M+ VCUs in effectiveness by their budget level, with some minor parity or reverses between the $1M-$500K VCUs and the <$500K VCUs. The "no budget" VCUs consistently rated the change they felt they were making as lower than other VCU budget levels.

Most common barriers to achieving the goals of the VCU

> *"There is without a doubt a lack of understanding about what the TeleCampus really does, the value it ultimately adds, and how complex collaboratives can be."*
>
> – Darcy Hardy, UT TeleCampus

When asked what barriers stood in the way of achieving their goals, respondents provided open-ended answers, which clustered around these issues: inadequate funding, inadequate staffing, lack of collaboration among institutions, fear of competition among institutions, and a lack of understanding of the VCU by leaders at high levels in

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institutions and states. While the funding and staffing problems are obvious and real, the other barriers mentioned may be more problems of perception. Fear of competition and confusion over the VCU's role may well be rooted in rumor and misunderstanding, which could be addressed through better communication strategies.

Figure 10: Most Common Barriers Faced by VCUs

Most Common Barriers Faced by VCUs:

Inadequate funding

Inadequate staffing

Lack of collaboration among institutions

Fear of competition among institutions

Lack of understanding of the VCU by leaders at high levels in institutions and states

Most common successes or unexpected outcomes of VCUs

"We learned some really good lessons from ONE about building a statewide collaborative."

– Holly Zanville, Oregon Network for Education

Similarly, the survey asked VCU leaders to describe their greatest success or "surprise" outcome. Responses clustered around these areas: significant enrollment increases for campuses; rapid growth in demand for courses; cooperation from unexpected places; faculty development initiatives; student and faculty satisfaction; creation of course development resources; and quality assurance processes, which have been mimicked by campuses. When VCUs run into barriers that seem insurmountable, it appears they simply look elsewhere for success opportunities. While collaboration may have proved impossible with one set of partners, there were others that came together quite naturally (especially with financial incentives). Finding those unexpected pockets of opportunity to demonstrate successful policies and programs was a major success of the VCUs.

Figure 11: Most Common Successes of VCUs

Most Common Successes of VCUs:

Significant enrollment increases for campuses

Rapid growth in demand for courses

Cooperation from unexpected places

Faculty development initiatives

Student and faculty satisfaction

Creation of course development resources

Quality assurance processes

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Implications

When VCU leaders were asked what they thought the lasting impact of the VCU would be, a common thread among responses was "bringing people together to make things happen." They thought their legacy would be to have set in place a structure and process for collaboration that might be carried over into future realms beyond even technology.

Implications for Policymakers

Beginning with WGU in 1996, a new organizational phenomenon seized the attention of policy makers. Concurrently, a new technological phenomenon was sweeping higher education. Leaders didn't fully understand what they were creating at the time, but knew they needed a vehicle to harness the technology and unleash its potential to solve a host of problems. The virtual university was created with high expectations. But in fact, VCUs created with the most fanfare (Education Network of Maine, WGU) did not meet the early and grand expectations set out for them. With the rise and fall of the economy in recent years (not to mention a few years of experience) expectations are more realistic now.

The lingering question is, "Do VCUs add any value?" Without question, VCUs have brought information, services, and programs within closer reach for some students. Some have served as a catalytic force for change within a state or system. Whether they are permanent fixtures in higher education remains to be seen. State higher education boards should periodically assess whether VCUs are essential to meeting the complex set of demands for online education, or whether institutions alone can meet the need.

> *"My prediction is that the only thing that's going to be left of the Virtual Learning Collaborative that continues to add value after some point is going to be some of the agreements by which students can take programs from other colleges and still get the support services at their home campus."*
>
> – Michael Wahl, Michigan Virtual Learning Collaborative

Over and over, VCU participants noted that one of their greatest challenges was a lack of understanding among leaders (especially institutional leaders) about the role and purpose of the VCU. Almost all of the VCU leaders interviewed see a time in the future when the VCU is no longer needed. Do state leaders still believe the VCU plays an important role in serving students? Policy makers and other officials to whom VCUs report are encouraged to use findings from this report to help raise awareness about the issues and challenges facing VCUs. Not all of the findings will apply to every VCU, but the study may help VCUs and policy leaders better define expectations, roles, and new opportunities. In particular, this research points toward a need for greater understanding in the following areas:

- ***Set clear expectations for the VCU.*** Expectations should be consistent with a VCU's organizational type and funding level. Almost all VCUs have as their major goal "expanding access." Yet policymakers should expect different results from a distributed VCU with no budget than from a high-service, high-budget VCU.
- ***Define VCU enrollments and users.*** System and state higher education leaders should work in conjunction with VCU leaders to develop common definitions for distance learning enrollment. The role and relationship of enrollments to VCU effectiveness and efficiency are nebulous at best. Few VCUs can legitimately or accurately identify students as "VCU students." Many of the VCUs neither generate nor manage the students who benefit from VCU policy efforts, use VCU infrastructure or services – and in all cases the courses and programs in which students are enrolled are accredited by the provider institutions. If policy leaders expect to assess the impact of VCUs on expanding access, statewide data collection must be revised to accurately reflect "real" VCU supported enrollments and users.

- ***Clearly define VCU policy roles.*** Make sure institutions understand the role the VCU is expected to play in statewide or systemwide policy change. Institutions are more likely to collaborate with an organization that has a clear mandate from the system or state and resources to accomplish its mission.
- ***Hold the VCU accountable for measuring progress towards and meeting its goals.*** Consider encouraging the VCU to benchmark against peer VCUs.
- ***Encourage sustainable business practices.*** VCUs can build cost-efficient, sustainable models by taking more aggressive roles in collaborative program development, quality assurance, standardization, and scalability.

Finally, it is important to remember that VCUs are still early in their organizational life cycles. Most VCU leaders believe they have met their goals in an overall sense, but there is much work left to do. Organizational maturity looms far, and indeed may never be reached. VCUs were once a policy innovation that nearly every state had to have – a home for entrepreneurial administrators and unruly academics. While that spirit remains strong at the VCU, there is also a sense of responsibility and pressure to prove its value and long-term viability. This would be expected of any public institution, and policy makers should expect no less from the VCU.

A Revised Taxonomy

There is a growing body of literature on the subject of virtual colleges and universities. Many articles and reports have focused on case studies of particular states or organizations, which adds depth and an opportunity for rich understanding of these complex organizations. Missing from the literature was evidence on VCUs from a national perspective, supported by a foundation of data. This study begins the effort at understanding the behavior of VCUs, and their impact as a whole on American higher education.

As mentioned earlier, researchers have proposed different classification strategies for VCUs. Building upon the 1999 Wolf and Johnstone taxonomy for VCUs, this research leads to a modified taxonomy that better represents current VCU structures and behaviors. The Wolf and Johnstone taxonomy classified VCUs along a dimension of collaboration that ranged from independence to highly distributed collaboration – roughly described as follows:

Type 1 – Degree-granting
Type 2 – Central student services and academic articulation
Type 3 – Limited services; little or no articulation
Type 4 – Electronic course catalog; little or no services; no articulation

Type 1 VCUs (degree-granting) were not represented in the present study, but remain in the taxonomy (see *Table 22*) since those entities exist, and indeed are probably the only "true" virtual universities. Of the consortial VCUs, Type 2, which provides centralized academic and student services, remains a viable category – though relabeled more descriptively as "Central Agency Model." Type 4, the electronic catalog with little or no services, also remains and is relabeled as "Distributed Agency Model." Type 3 VCUs (those that provide student services, but no articulation) did not discriminate themselves strongly enough in the current data set to warrant a separate classification. (The six VCUs classified as Type 3 possessed attributes allowing them to be absorbed into either "Distributed" or "Central.")

Upon analysis it becomes clear that conceptualizing VCUs along a single dimension of consortial collaboration (the degree to which VCUs link policies, programs, services, and infrastructure) provides too limited a view of the activities the VCUs were involved in, their success at addressing them, and their impact on state-level goals and aspirations. Viewing VCUs using two dimensions: the degree of centralization and the degree to which they were implementing business practices – provides a broader and more informative perspective on the how VCUs are evolving. The new "Business Practice" dimension produced two new VCU types, which possess business-like attributes separate from either distributed or centralized VCUs. *Table 21* shows the two dimensions, along with the new VCU types: "Distributed Enterprise Model" and "Central Enterprise Model."

Table 21: VCU Two-Dimensional Taxonomy

	Low Business Practice	High Business Practice
High Centralization	***Central Agency Model*** Provides central student services and academic articulation. Organizationally and financially embedded in an academic agency, such as a system office or coordinating board.	***Central Enterprise Model*** Provides central student services and academic articulation. May be organizationally embedded in an academic agency, but behaves as a business enterprise by building revenue streams for self-sustainability and engaging in quality control, performance measurement, standardization, and/or benchmarking.
Low Centralization	***Distributed Agency Model*** Provides electronic course catalog; little or no services; no articulation. Organizationally and financially embedded in an academic agency, such as a system office or coordinating board.	***Distributed Enterprise Model*** Provides electronic course catalog; little or no services; no articulation. May be organizationally embedded in an academic agency, but engages in limited business practices, such as quality control, performance measurement, standardization, and/or benchmarking.

This taxonomy results in viewing VCUs as taking either an approach of centralizing the management of services associated with online learning across a state/system or supporting a distributed environment of online instructional endeavors. It also considers how the VCU conceptualizes itself as an entity – whether it sees itself as a quasi-independent business or as an academic agency.

Another angle from which to look at VCU types is to conceptualize them along the dimension of the degree of management authority the VCU holds in carrying out its mission (See *Table 22*). Distributed models tend to have less formal management authority since there are fewer functions for which they are responsible. Centralized models have greater authority since they are responsible for more services. The "Enterprise" versions of each of these models exert greater management authority than their non-enterprise counterparts since they may be controlling decisions about quality, standardization, scalability, and measurement. *Table 22* shows the taxonomy along the continuum of management authority.

Describing the four consortial models

Distributed Agency VCUs have little direct control over services beyond the electronic catalog. On the other hand, these organizations report greater success than centralized VCUs on "collaborative" measures, such as fostering collaborative program development, decreasing duplication, and being an entity less restricted by policy – goals that seek to increase the effectiveness of higher education through processes that involve shared negotiations and a focus on participation. An example of a Distributed Agency VCU is the Oregon Network for Education (http://www.oregonone.org). Leaders in Oregon intentionally designed a decentralized model, knowing the state

Table 22: Taxonomy of Virtual Colleges and Universities Using Dimension of Management Authority

Degree of Management Authority	VCU Type		Number of VCUs	Percent of VCUs
Low ↓ Moderate ↓ High ↓ Full	Consortial VCUs	***Distributed Agency Model***	16	31%
		Distributed Enterprise Model	5	10%
		Central Agency Model	20	39%
		Central Enterprise Model	10	20%
	Stand-alone VCUs	***Degree-Granting Model***		

needed a VCU that would serve student interests, yet not be expensive to maintain. Oregon Network for Education was initially funded through a FIPSE grant, and is operated by staff members of the Oregon University System office. It operates an electronic catalog of distance education courses offered by colleges, universities, and high schools throughout the state. Admission, registration, tuition, financial aid, advising, and other services are handled by provider institutions.

Distributed Enterprise VCUs are similar to Distributed Agency VCUs in terms of the limited number of services provided through the VCU. However, a group of VCUs in the "distributed" category distinguished themselves by taking on attributes that scored high on the "business practice" scale. Distributed Enterprise VCUs engaged in practices such as self-sustainability, quality control, performance measurement, standardization, and benchmarking - though in all cases their participation in these activities was lower than that of Central Enterprise VCUs. An example of a Distributed Enterprise VCU is the Louisiana Board of Regents Electronic Campus (http://epscor.phys.lsu.edu/lasrec). The electronic campus describes itself as a "shopping mall" that puts every technical college, community college, two-year, and four-year institution in Louisiana at students' fingertips. The electronic catalog allows students to search for courses and programs, then instructs them to communicate directly with the institution for all aspects of their online experience. While Louisiana's electronic campus operates as a distributed VCU model, it qualifies as an "Enterprise VCU" because it exercises a limited role in both quality assurance and standardization/scalability of courses listed on its site. Additionally, the Louisiana BOR Electronic Campus actively measures progress towards its goals, scoring in the top five VCUs nationally for measuring progress.

Central Agency VCUs exercise greater management authority than distributed VCUs by providing direct services to students and formal articulation among campuses. These VCUs also report greater success than distributed VCUs in leading technology initiatives, managing distributed resources, and centralizing resources - goals that focus on increasing the efficiency of higher education by focusing on technology and shared infrastructure. An example of a Central Agency VCU is the Ohio Learning Network (www.oln.org). In Ohio, leaders identified a need for an entity that would help institutions collaborate in the development and delivery of distance education. Since

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its establishment in 1999, the Ohio Learning Network (OLN) has focused principally on building collaborative degree programs and digital content (via grants to institutions). It also runs an electronic catalog, and recently has expanded its reach with student services, such as advising and online tutoring. Unlike most Agency VCUs, the OLN is not organizationally embedded in a system office or state board. It is a program of the Ohio Board of Regents, but reports to its own governing board made up of chief academic officers from public and private colleges and universities in Ohio.

Central Enterprise VCUs discriminated themselves from the Central Agency VCUs by exerting yet stronger management control over their operations. Each was self-sustaining or planned to become self-sustaining. In addition, they help to improve the efficiency of the higher education system by meeting two or more of the following criteria:

- Plays a strong role in quality assurance
- Plays a strong role in standardization or scalability
- Actively measures progress towards goals
- Benchmarks itself against its peers.

The goal of self-sustainability was supported by findings that these VCUs placed a higher funding emphasis on service fees (from institutions) and revenue sharing (partial tuition), both of which provide revenue streams tied to volume. The Central Enterprise VCUs were the most likely to take an active role in promoting standardization and scalability of instruction, addressing the issues that might dramatically increase (or impede) growth of VCU user volume, and thus the revenues tied to that growth.

The Central Enterprise VCUs also reported consistent attention to appropriate definitions of VCU "students" and "users." For example, UMass Online reports enrollments only of those students who are not matriculated as on campus students while Kentucky Virtual University counts only those users of specific KYVU services such as registration, portal, or course management software. While these methods typically result in lower numbers than listing all students in all courses that are listed on the VCU website, they represent attempts to provide policy leaders with more rational, relevant, and "real" metrics with which to assess VCU impact.

An example of a Central Enterprise VCU is the University of Texas TeleCampus. Launched in 1998, the TeleCampus was designed to serve as a central support system for the distance education initiatives of the 15

Figure 12: Central Enterprise Model VCUs

Central Enterprise Model VCUs:

Colorado Community Colleges Online

Connecticut Distance Learning Consortium

Kentucky Virtual University

Michigan Virtual University

North Carolina Virtual Learning Community

SUNY Learning Network (New York)

Tennessee Board of Regents Online Degree Programs

UMass Online (Massachusetts)

UT TeleCampus (Texas)

Washington Online Virtual Campus

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campuses in the UT System. Early in its development, the TeleCampus focused attention on building support services for students and collaborative degree programs. With nine collaborative degree programs now in place, leaders describe the TeleCampus as a "collaboration engine" within the System. Quality Assurance (QA) is a driving factor behind TeleCampus operations, and in fact its QA model has spread to campus-based distance education initiatives, resulting in a general rise in the quality of online courses taught across the UT System. The TeleCampus supports standardization and scalability by providing templates that must be followed in course development and encouraging multiple solutions for large-scale, high enrollment (75+) online instruction. The Telecampus is planning to become at least 80% self-supporting within the next five years.

The application of business practices appears to make VCUs more effective at meeting their goals. An analysis of goals met (as perceived by VCU leaders) showed that Central Enterprise VCUs met their goals in every category to a higher degree than other VCUs. Ten VCUs (20%) met the new Central Enterprise definition. With permission from each named organization, *Figure 12* shows the ten Central Enterprise VCUs.

Analysis of the Central Enterprise Model

The Central Enterprise VCUs distinguished themselves by seeking – if not financial independence – then financial stability that would enable their operations to continue beyond state/system allocations. These VCUs also reported taking a strong role in three areas other VCUs generally left to the institutions: quality, use of standardized course templates, and the scalability of the courses. Most reported they reviewed and many that they approved courses for quality. In general, the Central Enterprise VCUs reported they either required or provided "master" courses or course templates to reduce duplication to a greater extent than other VCUs. Central Enterprise VCUs also reported they encouraged the design and development of large-scale, high-enrollment online instruction, while other VCUs were far more likely to take no specific role in the standardization or scalability of courses. Central Enterprise VCUs were more likely to benchmark themselves against other VCUs, to actively measure progress toward more goals, and to provide an annual report of performance than other VCUs. In many cases the Central Enterprise VCUs were among the most highly funded VCUs. Of those reporting financial data, seven were funded at $1,000,000 or more annually.

The Central Enterprise VCUs, as might be expected, also were likely to have a staff in excess of 15 members (though not always – one reported a staff of two). The sectors that the Central Enterprise VCUs served varied, with about half serving multiple sectors and half serving single sectors. The predominant governance structure for Central Enterprise VCUs was reporting to a system office (60%). Two reported to state coordinating or governing boards, and two reported to their own boards. The Central Enterprise VCUs were focused heavily on serving undergraduate students. Only two reported graduate enrollments larger than 20% of total enrollment, though for one of these graduate enrollments were 80% of total enrollment. Of the seven Central Enterprise VCUs reporting data on the geographic location of their students, five reported serving primarily students at a distance from campus, while two reported serving primarily campus-based students.

Concluding thoughts

Multiple Models for Success. There were superior performers from both the Central and the Distributed VCU categories – but VCUs that implemented business practices were more likely to report more success at meeting their goals than those that did not. The key concepts contained in the Enterprise Models are inherently in contradiction to the culture of higher education. In fact, the degree to which traditional academic values are violated likely increases as does the degree of management control of the VCU. Yet the Central Enterprise VCUs indicated the highest overall success. One could hypothesize, though it is too early to conclude, that the most successful VCUs are those that deviate substantially from the attributes that higher education holds near and dear (i.e., faculty and institutional autonomy).

Dollars drive decisions. Just explicitly stating the intention to be self-supporting causes and colors the decisions of VCU management. One cannot make any decision without appreciating its affect on the bottom line. Marrying this goal with the more altruistic, inclusive efforts of higher education to offer education to the masses has proved

to be a challenge for the VCU. This is an easy decision for a University of Phoenix – with its focus on high-enrollment, high-need, and high-tuition programs. What is different when the bottom line is assessed on lower division general education and lab-intensive courses, such as biology and nursing? A lot. And the VCUs are part of "piloting" that analysis with a new framework, a new point of view.

Future of VCUs. So what do the data and findings from this study suggest about the permanence of the VCUs? Are they transitional entities that will be deconstructed and absorbed into the structure of the larger enterprise such as the GLOBE project of the University System of Georgia? Will they become ongoing internal entities, providing support and coordination of multi-institutional efforts such as the Ohio Learning Network? And will a successful subset of self-supporting VCUs emerge that seek to serve and survive based upon their ability to develop new client groups? This study suggests that the ability to succeed in any of these possible roles requires focus the external or front-end activities (such as electronic catalog and learner services) and/or the internal or back-end activities (including policy leadership and providing a technology infrastructure for providers).

VCUs that focus primarily on the external activities and rely on their provider institutions to provide the internal support can expect heavy competition from accredited providers. While there was, at one time, opportunity for either non-accredited brokers (or brokers seeking to become accredited providers), this opportunity is on the decline, if not gone. The once perceived gap between nimble, entrepreneurial agencies' ability to get learning up online and slow-moving institutions has narrowed significantly. If the role of a VCU was to prompt institutions to "chase the techno-hare of the VCU," thus increasing their expertise, experience, and enthusiasm for online learning more rapidly – this has occurred. VCUs that support consortia with the goal of solely addressing policy and collaboration, while these needs will continue, will likely see their role as conveners, leaders, and thus as entities, decline.

VCUs that focus primarily on the internal activities (those that support institutional consortia and infrastructure) will see themselves increasingly considered "part of the infrastructure" of learning. Successful VCUs may or may not have a visible external presence in the future, but will be adapting and building technology and service solutions, which their constituencies depend upon. In Georgia, for example, the system is investing in a "multi-institutional enrollment model" whereby online courses may be cross-listed in college catalogs throughout the system. Once implemented, students will enroll in any online course as though it is being offered by their home campus. The back-end infrastructure will handle tuition differentials and administrative data exchange between campuses. While Georgia no longer maintains a VCU with a public presence, this more integrated approach may well represent the next generation of VCUs.

VCUs that take on both internal and external activities, that seek to lead or provide policy leadership, program development, learner services, and instructional infrastructure will have the greatest opportunity of emerging as new, entrepreneurial educational entities. These VCUs will likely succeed most when they successfully differentiate (and focus on) learner populations that are different (and not in direct competition with) the established instructional providers of the state – thus providing the necessary increase in educational capacity that states need.

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Appendix A: Research Methodology

The VCU Project was divided into four phases. The first phase was a literature review. The second phase included development and administration of a survey of all known statewide and systemwide VCUs. Sixty-one VCU organizations were identified, representing 45 states. The survey was conducted between October 2002 and January 2003. Surveys were returned by 51 VCUs, representing 40 states, for a response rate of 84%. In the third phase (March 2003), researchers conducted in-depth telephone interviews with six VCU leaders. Finally, the fourth phase included data analysis and reporting. A five-member advisory team provided ongoing advice and counsel as the project unfolded.

The key research questions, below, were designed to address the major project goals:

1. **How are VCUs structured as organizations?**
   a. What VCU models are states deploying?
   b. How does governance affect VCU operations?
   c. How does the size of budget affect VCU operations?
2. **How well are VCUs meeting their goals?**
   a. What were the initial goals for the VCU?
   b. How have the goals changed since the founding of the VCU?
   c. How well do VCU leaders perceive they have met their goals?
   d. How is progress towards or achievement of the goals measured/reported?
3. **How are providers and students participating in VCUs?**
   a. What types of providers participate in VCUs, and what programs are offered?
   b. What are the programs, enrollments, and student characteristics of VCUs?
4. **What are the policy implications that can provide direction to policymakers?**
   a. Is there a need for virtual universities as separate organizational entities apart from institutions of higher education or are they best seen as temporary, transitory instruments of change?
   b. Have VCUs been successful in expanding access?
   c. Are VCUs financially sustainable?
   d. Have VCUs facilitated institutional policy change to create a more seamless experience for students?

Study limitations: Every research project has limitations, and the VCU Project was no exception. First, the data collection instruments (both survey and interview protocol) were designed for VCU leaders. This group of respondents was estimated to be the most knowledgeable about the broad range and diversity of VCU operations, and thus most likely to provide an accurate picture of the VCU goals, challenges, successes, and changes. However, the researchers recognize that VCU leaders offer only one perspective into the statewide or systemwide landscape. If time and resources were not a constraint, the project might have gathered data from other players in the VCU arena, for example, a system level or institutional academic vice president. Second, it was necessary to set boundaries around the study population. The VCU study does not include multi-state initiatives, for-profit entities, or single institutional VCU innovations. Together with the advisory team and sponsoring agencies (SHEEO and WCET), the project researchers determined that a focus on statewide and systemwide consortia would bring the most value to the sponsoring organizations' memberships.

Confidentiality: One condition researchers set in the survey process was to support the requests by VCU leaders for confidentiality of the data they supplied. Many of these organizations are in the early phases of development and adoption, and it was felt that respecting the confidentiality of the data would increase the amount and validity of the aggregate data for the study. The goal of the VCU project was to draw an aggregate picture of VCU operations across the nation, allowing institutions to compare themselves with a national set of data – rather than facilitate premature and often inaccurate comparison between vastly different types of endeavors. Individual VCUs named in this report granted permission to do so.

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